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MISS MILLARD,
BOOK AND CURIO FINDER,
TEDDINGTON, MIDDLESEX.


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THE
DIFFERENCES,
CAUSES, AND
IUDGEMENTS OF
VRINE:

ACCORDING TO
THE BEST WRITERS
THEREOF, BOTH OLD
and new, summarily
collected.

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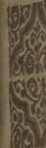
BY I. Fletcher.

John Legatt


LONDON,
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DIFFERENT
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ACCORDING TO
THE BEST WRITERS
THERE IS BOTH OLD
and new, commonly
collected



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The contents of this Booke.

AN admonition to the Reader of the order of the booke, and authors from whence it was gathered.

A preface wherein the judgement by urine is preferred before that by the pulse. Also the generation of urine in mans body.

Cap. 1. Generall considerations in judgement of urines, how many things hinder judgement in respect of the urinall, physitian, and urine it self to the 5. page, and how many things alter the urine in respect of age, sexe, complexion, time of the yeare, kinde of life, &c. to the 10. page.

2. Of the substance of urine thin to the 14. page, thicke to the 17. page, and meane to the 19.

3 Of clearenesse and darkenesse of urine to the 24. page.

4. Of 21. colours of urine, pag. 25. where the reader must adde after pale, subspicuous, subpallidus, these words. If you see the a piece of the rinde of pomegranate, and then put to it thrice as much cleane water, it will make a pale colour. Also at flaxen, spicuous, adde these words. But if you put thereto a little or none of cleane water, it will be flaxen colour.

The Contents.

5 Of substance and colour ioyntly together, and first of thin urine with his colours, to the 34. page, thicke with his colours to the 44. page.

6 Quantity of urine much to the 48. page, little to the 49. page.

7 Of the contents of the urine in generall, and first where contents want, the division of the contents, page 53. of their colour, 53. substance thicke, 55. thin, 56. quantity, 57.

8 Of contents in speciall, and first of the 15. deformed contents in the sediment to the 77. page. in the middle region, page 77. in the uppermost region, pag. 79. and here of the colours, 80. deformed contents, 81. of the crowne, 82. his colours, 83. of some, froth, bubbles, 85. and 3. differences, 89. Drops of fat, 90.

9 Smell of urine, 90.

10 Manner of pissing, 95.

11 Suppression of urine, 98.

12 Of what parts of the body urine groweth signification, 101.

13 Of concoct, crude, and dangerous urines, 101.

14 A methodicall practise in judgement of urine, 107.

15 Of the qualities, commodities, and medicines of urine, and of diseases touching urine, and the remedies thereof, 117.

An Alphabetick Table to the whole Booke.

An



An admonition to the READER.



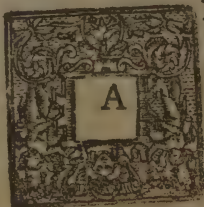
His Treatise following I first digested into tables for mine own privat use, which afterwards was by my friend converted into this forme to fit the presse. And therefore the studious reader must still remember how one part followeth another in order : and that which is spoken generally before a division, to be understood of all the members following under that head according to the law of method. A word is enough to him that is acquainted with tables. The Treatise it selfe is an abridgement wholly gathered out of other mens writings, I challenge nothing to my selfe but the collection and disposition hereof. Wherein for better satisfaction of the Reader, I have many times cited the Author, whose testimony I

use, and now and then I have quoted the page
of such books as I then followed, and whereof
I set downe the catalogue, where, when, and
in what forme they were printed.

- Willichius and Reusner Basilea, 1592. 8.*
Argenterius de urinis, 1591. 8.
Record in English. London. 8.
Actuarius, Parisiis, 1548. 8.
Aegidius Basilea, 1506. 8.
Weckers Syntaxis, Basilea, 1582. fol.
Fernelius. Francofurti, 1593. 8.
Montanus de Excrementis. Venetiis,
1554. 8.
Cappivaccius de urinis. Servesta, 1595. 8.
Vassens de urinis. Lugduni, 1645. 16.
Io. Hasfurtus. Venetiis, 1584. 4.
Salvianus. Roma, 1587. 8.
Blosii Hollerii theorica medicina. Ar-
gentina, 1565. 8.

The

The Preface.



Mongst all signes of sicknes or health whereby the skilfull Physitian is led into the knowledge of the state of the body, two are of most general and certain signification which are taken from the pulse and urine, without which all the knowledge of physicke besides, is obscure, doubtfull, and uncertain. Whereof the first sheweth the estate of the heart and arteries, the second of the liver and veins. Both of such speciall use in signification of diseases incident to mans body; that joyned together, they certainly instruct the Physitian whether the disease tendeth to health or death, but whether of these two severally considered doth give more certain signification, I had rather leave it to be determined of others who can better doe it then my selfe: yet under their correction I thinke that the urine giveth the most manifest certaine and generall signification of

The Preface.

all diseases; because with the blood it is conveyed into all parts of the body, and from thence returneth backe againe in the veines to the liver and vessels of urine, bringing with it some note of the state and disposition of all those parts from whence it commeth. Neither is there any other excrement that hath so many differences as the urine, neither from which so many significatiōs may be taken as from it, in the substance, colour, quantity, contents, smell, manner of pissing, &c. in which the Physician may with more profit exercise himselfe then in the six differences of pulses, the art whereof *Hippocrates* either never knew, or neglected. And *Galen* cōfesseth of himselfe, that he spent 20. yeares studying that way, before he could attain the knowledge of the (*systole*) or contraction of the pulse in the arteries, which being unknowne, the pulse also must remain unknowne; and yet it is uncertaine whether *Galen* indeed ever did attain therto. From *Galens* time for 1200. yeares after, this knowledge lay buried in the black dungeon of ignorance, untill *Iosephus Struthius* brought it to some light: and no marvel; for the continuall mutability and alteration of the pulse cannot be comprehended by art.

For

The Preface.

For as the affections of mans minde, anger, feare, joy, sorrow, love, hatred, springing from the heart doe vary; so the pulse differeth in every moment. So we read that *Erasistratus* the Physitian perceived by the pulse of *Antiochus* son to the King of Syria and Persia, that he was in love with *Stratonica* his step-mother. And *Galen* saith that hee perceived by the often change of the pulse of a woman, that she was in love with *Pylades*. Besides that, the tunicles of the arteries, the skin and flesh in the wrest of the hand where the pulse is felt, and the skin and flesh of the Physitians hand feeling the pulse, are in some harder and in some softer. Againe, the patients hand differing in heate or cold, or manner of position, higher, lower, or on the one side, and the Physitians hand touching the arteries softly, or pressing them, and infinit other circumstances which make such sudden and momentary alteration of the pulse that as in ancient time, so at this present amongst us there be very few skilfull in this part of judgement. But on the contrary side in urine there is no such labour or cause of doubt, for we may see it, and consider well of it, for many houres together, and find no alteration therein. And of this

Hip-

The Preface.

Hippocrates, Galen, Aegideus, Aetnarius, Avicen, and infinite others in all ages have delivered precepts, and gathered judgments, and therefore as a part of physicke better knowne, and of more certainty then the pulse, I have in this short Treatise handled, divided into his differences, and to every difference I have added his judgment together with a reason thereof. And in many places I have more especially distinguished it, not onely by other differences of the urine, but also by other accidents of the disease it selfe. As for example, pag. 47. one signification of much urine is a consumption of the whole body, whereto I have added other signes by the urine, as that it is somewhat fatty, in colour palew, reddish, high coloured, and without other signs of concoction. And hereof I presently annexe this cause; for so the profitable fat, moisture, humors, and substantiall parts of the body are molten, dissolved, and voided by urine. The rest I leave to the diligence of the studious reader, who with smal consideration may easily conceive the same. And here I would make an end, but that I thinke it not amisse in few words to shew the generation of urine in mans body, and the vessels thereto belonging.

The

The Preface.

The meat and drinke received by the mouth, and descending downe into the stomacke, and there concocted together, incorporated and made one substance (*chylus*) and thence passing by an issue in the bottome of the stomacke (*pylorus*) to the first gut (*duodenum*) and from thence to the hungry gut (*ieiunum*) from thence againe five of the eight mesaraicall veines sucke so much as is profitable nourishment (the rest being unprofitable for nourishment is voided by stooles) which againe is conveyed into *vena porta*, and at length after many purifications and concoctions in the parts before mentioned; to the liver, where it is converted into blood, and thence sent into the hollow veine, where it is againe more purified, the excrementitious parts being sequestred, separated, and sent to other places, as the choler to the gall, melancholy to the spleen and the watery or wheyish part to the emulgent or sucking veines, from whence againe it is drawne of the reines where it is altered perfectly into urine, which as unprofitable descendeth into the water-conduits (*ureteres*) and thence into the bladder which at length at a mans pleasure by help of the muscle shutting the necke of
the

The Preface.

the bladder is voided out by the yard. Yet some part of this thin wheyish humor is not after this sort conveyed from the liver to the bladder, but as I have shewed, *cap. 12.* is together with the blood in the veines derived into all parts of the body, and at length returning backe againe the same way, is expelled by the yard. Seeing then urine passeth through so many vessels, and receiveth so many concoctions and preparations before it can be expelled, it must needs admit many alterations. And yet we see by daily experience that great drinkers, those which drinke some diuretique potion, and especially those who are troubled with the pissing evill, doe pisse out presently after drinke not concoct, nor much altered from the drinke received. Hereof *Galen 3. de facult. nat. cap. 15.* yeeldeth these reasons. The great desire of the stomach to receive drinke, the thin, piercing, and subtle substance of the drinke speedily running into all parts: the widenesse of the passages, and lastly the strong attractive faculty of the reines, all which concurring together, doe cause the drinke received so quickly to passe through the parts of the body without any great alteration. Yet some the better to satisfie these doubts have devised,
and

The Preface.

and by arguments laboured to confirme a readier and shorter course for the drinke received to passe to the reins by the wind-pipe, great artery (*aorta*) emulgent veines, and bladder. But because this opinion is so contrary to the reputed and received truth of *Hippocrates*, *Galen*, and all Physitians, as also that it imagineth another free passage (beside the meat-pipe, through the wind-pipe and lungs: whereas we find by experience that a little dust in travelling, or a crum of bread in eating falling into the same is ready to choke a man, as a kernell of a raison did *Anacreon* the Poet; and that therefore nature hath ordained a cover for the wind-pipe (*epiglottis*) lest in eating or drinking something should passe that way. And the Physitians doe forbid much talke or disputation at meat, lest the cover being opened thereby should let something passe that way. I cease further to commend it.

of

Of the instruments and parts by which urine
is engendred and passeth, marke this
figure following.

A. is the liver.

B. the hollow
veine.

C. veines by which
the reins doe draw
the urine, and ther-
fore bee called the
sucking veines, *ve-
nae emulgentes*.

D. the reins.

E. The water-pipes
ureteres.

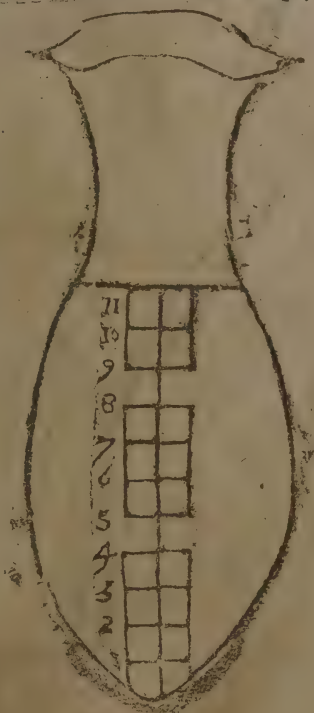
F. is the bladder.

G. the spout of the
yard.

All other parts
beside, appertaine
to generation and
feed.



A perfit forme of the urinall, wherein the urine according to his height is divided into three regions for the distinction of the three contents mentioned, Chap. 7, 8.



1, 2, 3, 4. the lowest region for the sediment.
 5, 6, 7, 8. the middle region for the swimme.
 9, 10, 11, 12. the uppermost region for the cloud.
 In the top whereof the black line going through
 the thickness of the urinal is the circle or crown

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CHAP. I.

*Of generall considerations in judgement
of Urines.*



Vdgements of an
urine are considered
in respect of the uri-
nall of the Physitian,
& of the urine it self.

1. In respect of the u-
rinal, which ought not
to bee of any colour,

for so it would alter the apparent colour of
the urine. Not strait or broad beneath,
which alter the contents. Not open in the
top, for so dust or other filth might fall
in: aire, cold, or heat might soone alter it.
Not stopped with Woollen or Linnen, for
so lint or Cotten might fall in. Not too
neere, nor too far off, for the substance too
neere might appeare thicker: and too farre
off, thinner. *Aegid. 10. Argent. 91. contra-*

The urinal

A

riwise

riwise in Wine and Vineger. *Capiuac. 88.*
Not uncleane within.

The Vrinall therefore ought to be a cleare glasse, or pure chrystall, without any colour at all or notable thicknesse. Broad, round, and oblonge below, and straiter above, conically ascending like to a mans bladder which it representeth; that a fit place may remaine for the fashion of the sediment: and stopped at the top with leather, paper, &c. that nothing fall in, nor ayre easily get in.

Physitian.

2. In respect of the Physitian, who may not see the urine in a place either too darke, or by candle-light, for so the colour will appeare altered. Or else too light, as the Sunne-beames make the colour more remisse.

Therefore put your hand or a blacke cloth betwixt the light and the Vrinall on the opposite part of the Vrinall, that the colour and contents may bee the better discerned, and your eyes be not dazaled with the light.

Vrine.

3. In respect of the urine it selfe: where-in are considered, 1. Collection.

2. Things that hinder iudgement.

3. Differences.

1.
Collection.

Collection. 1. When nourishment is perfectly

perfectly digested, which is commonly that which is first made in the morning after the nights sleep. For that which is made lately after eating or drinking, or fit of an ague, hath neither colour, consistence, nor contents, being not concoct.

Argent 91. ex Avicenna.

2. Take the whole urine and not the part, so much as is made at one time; but mingle not urines made at severall times; but keep them severall both for quantity, colour, and contents.

3. When the urine is new made and yet warme, it is best to see the colour, substance, and perspecuity; at what time you may see also the quantity and smell.

4. When it is settled in the Vrinall fully it is best to see the contents and bubbles. You may well also then see the substance.

Actuar. Fernel. 452.

5. Let it not be kept past sixe houres, for being longer kept it waxeth corrupt.

Arg. 91. ex Avicenna.

6. Yet it is good to see the urine lately made, and oftentimes after to observe the perseverance or alteration of the substance, froth, and perspecuity, &c. *Salvian. 222.*

Things which hinder judgement. 1.

A 2

Much

Much shaking of it, or pouring it out, of one vessell into another.

2. Cold or winde to congeale it and make it turne thicke as in Winter : but being chafed at the fire it returneth again, except it be too long kept. *Cap. 2.*

Things
which hin-
der judge-
ment.

3. Winde to move or shake it.

4. Placed in the heate of the Sunne, or neere the fire, whereby that which is thin and subtile is drawne out, and the rest remaineth thicke, dreggy : and so sometimes the urine that was made thicke and troubled, by great heate of the fire waxeth cleere, and the spume or bubble vanissheth away, which otherwise would continue.

Salvian. 227.

5. Meats and drinks lately taken before alter the colour, quantity, substance, and smell sometimes.

6. Medicines taken, as Rheubarb, Saffron, Cinnamon, broth of Cherries, make the urine yellow; Cassia, blackish; Oyle of Bay, Henbane, or *Vnguentum Martiatum* anointed, *sena rubia maior*, *Cantharides*, applied to any part of the body, reddish.

7. Exercise, fasting, watching, labour, anger, feare, vomiting, sweating, purging, &c. alter the colour, substance, quantity, contents.

8. Reines

of Urines.

8. Reines or Bladder affected hinder the judgement of the inner parts. *Fernel.*

Differences are either principall in the urine, or lesse principall.

Principall are, 1. Substance. *Cap. 2.*

3.
Principall
differences
of the urin.

2. Quality, and that either first as heate exceeding perceived by the patient in making it, as in inflammation of the liver, or by the Physitian touching the urinall with his hand.

2 Heate moderate or temperate.

3 Deficient or under temperate.

Or second quality perceived. 1. by sight, as perspicuity, light through, or darke and troubled. *Cap. 3.*

Colour. *Cap. 4.*

Taste, but that being too base for the Physitian, we leave to speake of it.

Smell. *Cap. 9.*

3 Substance and colour joyntly, *Cap. 5.*

4 Quantity, *Cap. 6.*

5 Contents wanting three regions, sediment, swim, cloud: where we also consider substance, colour, quantity. *Cap. 7. 8.*

Contents deformed.

Contents duely knit.

Lesse principall, which though they doe not immediately helpe to judge of the urine, yet they declare the nature of

Lesse principall differences.

the urine and griefs of the body. Such arise from the causes ; as choler, melancholy, sleep, watching, diseases.

From the effects, signifying health, death, griefes of the stomacke, head, liver, breast, veines.

From the manner of pissing. *Cap. 10.*

From suppression of urine. *Cap. 11.*

The best
urine simply.

The best urine simply in a perfect and absolute temperate whole man, which is the rule of all the rest, is that which is made without heate, as in burning agues. *Capivac. 83.* without cold, *Capivac. 11.* paine, or stinch. Of colour palew or light saffron, perspicuous moderately, *Capivac. 113.* Of substance meane. Of quantity likewise meane, like to the former dayes urine, and proportionable to the drinke received yesterday and other daies before, and somewhat lesse because some is spent and wasted in the body. Having contents white, smooth, equall, settling downe to the bottome of the urinall, not having bubbles, filaments, or any other evill contents. Having sediment likewise white, smooth, equall, pyramidally ascending, nor tattered, ragged, or dispersed, neither cleaving together, so but that they depart asunder, the urinall being shaken, and

and ascend lightly without trouble of the urine. And all these thus continuing long.

Montan. 46. B.

The best urine in respect of age, sexe, The best time of the yeare, kinde of life, complexi-
ons, is as followeth. urine in re-
spect of age

1 First for children, urine is best of substance thicke. For thin is lethall. *Salvian.* 33. 206.

2 Of quantity much.

3 Of colour white a little by continuall feeding on milke, *Salv.* 204. or because choller or blood to colour the urine resteth or is drowned by too much moisture. Also by debility, long sleep, much rest, which because they cannot well move, increaseth moisture and decaie the heate.

2 The best for springalls, hath sediment heaped and increased, substance thicke, but rather inclining to thinne. Colour yellow or light saffron: blacke deadly *Salvian.* 93. contents more then in men.

3 For men that which is set down first for a perfect rule of the rest.

4 For old men with substance thin, colour white, sediment little.

5 For women whole. In substance rather thicke then thin, darke, troubled, Sexe.

with many things swimming in it, not so cleere as in men.

In colour declining from light or pale w towards white with some darknesse.

Quantity much.

Sediment impure, much thicker and whiter then in mens urine.

Distinction between men and womens urine is easily knowne by often comparing them together. *Fernel.*

6 In respect of the time of the yeare, Time of best urine beginning in the spring, of colour white and pale, quantity greater, contents more thicker and more raw. In the spring proceeding, colour from pale and flaxen to palew and light; contents meane, substance equall. In summer beginning, colour palew and light, saffron, substance thinner, sediment thinner, white, smooth, equall. In Summer proceeding, colour yellow saffron, substance very thin, sediment little; thinne and declining to white.

In Autumne beginning, sediment little yet without fault. In Autumne proceeding all meane.

In Winter beginning, colour white, substance thicker. *Fernel.* Contents moe and rawer. In Winter proceeding, colour white

white, quantity greater, contents more and cruder.

7 In respect of the kinde of life, as wherein there is much exercise, fasting, anger maketh commotion of spirits and humours, watching, meats of hot operation, the urine is more coloured, and sediments fewer at the beginning as long as those passions doe inflame the heate of the body, and there is moisture which may be kindled; but that failing, and the heate languishing and decaying, the colour waxeth more and more remisse again. Kinde of Life.

Argent. 36. Salvian. 71. so in agues beginning, the urine is white, after that (heate increasing) yellow, and red; and in declination the heate decaying, more remisse again. So urine voided after large drinking is first white, after more coloured, and at length returneth to his former colour againe and consistence.

And where there is much idlenes, gluttony, surfeits, sleep, drunkenness, use of cold meates, the urine is white and thicke, sediment much and crude, naturall heate being oppressed and suffocated.

8 In respect of complexions, the flegmaticke hath urine of colour white, substance thicke, quantity increased, and the sediment Complexion.

ment more raw.

The chollericke yellow as pure gold, much coloured, and of substance thin.

The melancholike white, with a certaine dimnesse, because melancholy is in quality cold and dry. But if melancholy be voided, in substance the urine is blacke, as in criticall evacuations of melancholy. *Agid. 37.*

The sanguine reddish with a certaine darknesse, substance indifferent thicke

CHAP. II

Of the substance of Vrine.



He substance of urine is

either { thin,
thicke,
or meane.

^{1.}
Thin substance.

Vrine thinne as water, such as every urine is of it owne nature, neither can it waxe thicke by seeing having little earthly substance: neither congeale through cold in our bodies, which be hot as long as we live, is not of so good signification as thicke urine, because it signifieth crudity and debility: whereas thicke urine signifieth some

some separation and beginning of concoction, as also strength of the expulsive faculty to expell grosse matter, and mixt with urine : but thin urine doth signifie either.

1. Obstruction in the veines or liver Obstru-
m.
with an ague, of the reines and vessels of urine without an ague by tough and clammy humours, cloddes of bloud, tumors, stone, flesh growing, whereby the thicker part of the urine is staied, and the thinner in small quantity, as it were through a colander or strainer is let passe, and may be knowne by the paine in the obstructed part. *Salv.* II.

2. Or crudity and lacke of concoction Crudity.
and separation, through cold and want of naturall heate, or abundance of unnaturall heate in an ague, and other signes of heate, as in simple distemperatures without mixture of humours, as is seene in cold, much drinking of wine, water and drinke.

Pissing presently after drinking, and especially which provoketh urine, and staying not in the body untill humours be concocted to isshue with it to give it substance and tincture : for the second urine staying longer, is thicker and more coloured,

loured, and so the third and the fourth, as sooner or later, more or lesse thicke and coloured, as concoction and heate is more or lesse strong. *Capiv.* 103. and at length returneth to his former substance.

In the beginning of diseases when all humors are raw and unfit to bee concoct, the urine is white and thin, and after that heate increasing is yellow and red, and in declination the heate decreasing more remisse againe, untill he returne unto his former state of health.

In surfetting, drunkennesse, gluttony, and especially pissing presently after.

When the stomach is cold, whereby meate and humors are raw, and so sent to the liver.

When the liver of it selfe is cold and weake, receiving them raw from the stomach, and sendeth them so to the reines. For the error of the first concoction is not taken away in the second.

When the reines and vessels of urine through weaknes are not able to draw or expell any humour but thin. *Capiv.* 86.

Colour white in children signifieth death. *Salvian.* 24.

Likewise in weake persons.

And in sharp diseases. *Argent.* 24.

Conti-

Continuance of the disease, in intermitting agues, or strong persons.

Recidivation or returning againe of the disease, being made on the criticall day.

3. Or thin urine signifieth conversion of the humour another way with signes of concoction, and more coloured urine precedent, as to the whole body with paine in the whole body, and thin water long continuing, the humour regurgitating into all places, as in the small Pocks, Measles, Impostumes, Dropsie, Botches, and Felons.

Conclufion of the humor.

Aegid. 230.

Into the stomach, and causeth upbraidings and vomitings.

To the braine in a frenzie with a burning ague, and is mortall.

Galen never knew any escape, *Mont.*

To the Liver with paine in the right side.

To the pores of the skin in sweat.

To the short ribbes, arme-holes, neeke, privy parts, gathering to an head, making an impostume.

To the belly in dropsies beginning. For after the matter increasing, the urine waxeth thicker.

To the reins in Nephritide.

To

To the seat in the Hemerodes.

To the joynts, as to the huckle-bone in *sciatica*, knees, feet, hands in the gout, drawing humors to them. *Argent. 24.*

To the guts, as in dysenteries, fluxes, laskes, loosnesse.

To the cods in Hydrocele.

To the mother, as immoderate flux of the termes. *Record.*

To other parts that are weake and grieved whither humors fall. Or being inflamed, draw humors to them much like cupping-glasses.

^{2.} Vrine thicke as fyrrup boiled to his height, or yellow choler in the gall. *Acgid. 23.* is alwaies made by mixture of other humors, as bloud, choler, fleume not naturall, abounding melancholy, rawe humors, purulent matter, seed, gravell, or filaments. The farther placed from you the thinner it appeareth, and hath alwaies moates stirring up and downe contrary in both to Wine or Vineger, besides the smell. *Argent. 29.* which either may be cleered externally, being chafed at the fire, returning againe, (except it hath stood too long, or stood too long by the fire or in Sunne, *Arg. 47.* or such as waxe thicke, and are turned by standing in the cold

Thick substance.

cold extinguishing the heate and spirits of the urine :) or may be cleered of it selfe in the Vrinall, the thicker and grosser part settling downe to the sediment : and this hath alwaies a good signification that good concoction now beginneth in the liver, and that which is concoct hath now some forme though imperfect : but while the heate is fervent in the veins, some terrestriall matter is mixed therewith, which is not yet perfectly separated by the heate. Looke after in the declination of the disease. *Wecker.*

Or this thicke urine may not be cleered though chafed at the fire, which cometh either from the vessels and passages of urine, as the reines, bladder, yard, being too open and large. *Fernel. 449.* or exulcerated and apostumated, whereby the urine is tronbled, and with purulent matter, raw humor, or seed is white, of bloud red, and sometimes with gravell and filaments. All to be knowne by smell and grieve in the part. *Fern. 39. Arg. 22.*

Or else it cometh from some superiour member, as liver, spleene, veines, Nommacke, where it is alwaies an argument of heate oppressed and crudity; not that naturall heate is distempered, but suffoca-
ted

ted through abundance of humours. *Fern.*
 449. and is to bee understood either of
 one urine made at the same time, or many,
 urines made on severall daies, and severall
 times of the sicknesse. As in the begin-
 ning, where it sheweth abundance of
 grosse, raw, and flegmaticke humours :
 which cause head-aches in tertian and quo-
 tidian agues, and such urine now made,
 when as nature hath made no concoction
 or separation, it is through weaknesse of
 nature, of unnaturall heat (symptomaticall
 and ill) and other ill signes joyned withall,
 as feeble pulse, old age, Winter weaknes :
 it is mortall, except in diseases of choler,
 and bloud, which are soon concocted. *Arg.*
 29. but with good signes, as youth, strength,
 good sediment, continuance of the disease
 not desperate *Weck.* 13. *Sal.* 36. 138.
Cap. 100.

State, a better signe, because now natu-
 rall heat beginning to prevaile, doth sepa-
 rate and expell humors, which nourish the
 disease in strength of the patient, and o-
 ther good signes ; otherwise, that unnatu-
 rall heat putrefactive beginneth to move
 the humors, as chanceth often in pestilen-
 tiall agues. *Weck.* 13.

Declining, if thinne water was made
 before

before some daies, and after it is made, it cleareth in the Vrinall. *Sal. 201.* when as naturall heate hath made some concoction, and so expelleth the humor offending, especially being made on the criticall day, it is a very good signe, for thus many diseases are cured, as the sciatica, gout. *Sal. 37.* paine in the joynts.

And when the humour offending is expelled, and the patient recovered, the urine returneth to his colour and meane consistence againe. *Arg. 25.* But if it waxe thin and white too suddenly, or hastily, before the humor be expelled, and the patient recovered, it seemeth the humor is converted another way, where it makes an impostume drawing to a head, or to the braine as before in thin urine: looke immediately before in thicke humor which cleareth of it selfe.

Meane urine, neither so thin as water, neither so thicke as beastes water, but as white Wine or cleere Ale which waxeth thicke in the glasse, through cause externall, as cold or longer standing: for so in Winter urines turne sooner then in Summer: and being neere the fire or heate returne againe, except the naturall heate of the urine be totally extinct by too long,
B standing

3.
Mean substance.

standing, or by being in too hote a place as the sun, or too long by the fire, or in warme water, whereby the heate and spirit of the urine is dissipated, rarified, and evaporated out of the urine, *Argent. 47.* These two returne not.

Or through cause internall, *Videl. 1.* want of naturall heate : as old mens urines and those that are in recovery of their health, doe easily change and waxe thicke, and being chafed at the fire returne again, except they have stood long, &c. 2. Abundance of humors which nature can neither concoct nor detaine, but is almost suffocated therewith, as their urines which have crammed themselves with meat & drink are more easily turned and waxe thicke. And both these in whole men doe signifie health impaired, because heate hath entred into some raw matter in the veines, and cleareth it by rarifying the parts thereof, which heate and spirits being expelled by externall cold, the urine becommeth thicke, *Wecker.*

In sicke men in the beginning, ill, because the concoction is of unnaturall heate. After the beginning with other good signes, concoction of naturall heate : but with ill signes crudity of unnaturall heate.

But

But if the urine continue meane in the glasse, and yet after it hath setled, the thicker part falleth to the sediment, it signifieth good concoction in the stomacke, liver,veines, and lively naturall heate. *Fernel. 449.*

CHAP. III.

Of clearenesse and darknesse
of Urine.



Urine is also either perspicuous, light through or cleare, through which a man may discern his knockles. *Record.* and is not all one with thin urine :

1.
Cleare
urine.

for white wine is thin, and yet often darke, and not light through. Distilled wine is thin in substance, yet troubled and darke. This signifieth in whole men (if it be moderately perspicuous) perfit digestion, good humors, abundance of naturall heat, which at length doth separate and distinguish the hypostasis.

In sicke men if it be too cleare and saffron colour, signifieth yellow choler, unnaturall heate, as in agues. *Weck.* More

remisse, or darker, crude, and white, flegmatike, and watry matter, and signifieth cold, crudity, and continuance of the disease, and the more coloured the better. *Cappivac. 113.*

But in judgement of cleere and perspicuous urine in sicke persons, we must alwaies consider how their urine was in their health. For if it be the same urine that was in their health, it signifieth no ill: but if it change from lesse cleare to more cleare, and in colour saffron; then choler is augmented: in white colour flegme, and contrariwise.

2.
Dark urine

Or that is darke, troubled, not light through, through which one cannot see his knockles, is not all one with thicke urine, as *Galen* thought. *Salvian.* For fish-glew, horne, white of an egge, oyle, and glasse molten, and blackish wine are thick in substance, yet cleare perspicuous, or light through. *Fern. 450.*

1. Hereof are three kindes, whereof the first is darke accidentally by outward cold after it is made, as by cold ayre, cold water, winter: and this of all other is most thicke and darke, and doth staine the Urinall, especially in the crowne or top, with a certaine white clammy thin humor,

humor, which being chafed at the fire, or in warme water, returneth to it selfe againe as it was made (except it hath stood too long, *Cappivac.* 107.) whereby the inward heate of the urine is wholly extinguished. But that some urines more, some lesse, some sooner, some later, some scarcely at all waxe dreggy, thicke, troubled, and darke, is to be imputed to the impurity and want of heate in the urine it selfe, and outward cold extinguishing the internall heate, ratifying, dispersing, and drawing out the spirits and naturall heate of the urine, which being dissolved the urine waxeth troubled, thicke, and darke, *Argent.* 47. and this hath small signification in judgement of urines, saving in sharpe diseases it signifieth beginning of concoction. *Fernel.* 450.

The other two kinds are darke when they are first made. Dreggy urine, and confused urine.

2. Dreggy urine is, whose substance of it selfe, or by some internall mixture is thicke, and such as come often from filthy and uncleane reines: and this by chafing at the fire or other heate, cannot be altered and made cleere, and hath many moates flying, floating, and swimming in

the urine, which by standing settle down to the bottome, and becommeth a thicke residence, whereby the rest of the urine waxeth cleere. And this is like to wine troubled with mixture of dregges, such commeth from the reines, or bladdder, troubled with humors, which urine bringeth forth with it new ulcer, blood: old ulcer, rotten, purulent, and filthy matter.

Those which bee troubled with ache in their reines, make usually such urines through blood, matter, or other filthy impurity.

Veines abounding with grosse humors, which naturall heate can scarcely concoct, and so some part is voided: hereof rise long diseases, head-aches, present or to come, and if it continue long lethargy or veternus.

Criticall evacuation suddenly made after long obstruction of the veines, liver, reines, spleene, in whole men after exercise, in sick men in declination of diseases, especially in long continuing agues, as quartane, and in diseases of the liver, spleene, and breaking forth impostumes with ease of the patient.

Symptomaticall evacuation of humors raw, and superfluous from the veines, spleen,

spleene, liver, as in jaundice, and so voiding with the urine, being in colour red or yellow, as in the beginning of continuall, and intermitting agues.

3. Confused urine is darke, wherein no moats are perceived to swim, or any other thing without distinction, but the whole urine and every part thereof is all alike; neither by standing setleth any residence, or other thing to the bottome, whereby it may waxe clearer; and so continueth without alteration: yea, though it be chafed at the fire, and in warme water, and is like to wine which is changed and become dead with thunder, or with age is waxed sowre or tart, without clearenesse and brightnesse, and this never riseth of diseases in the reines, nor only of the inner parts, but alwaies commeth from diseases of the veines, neither doth it signifye abundance of raw humors, but properly confusion, putrefaction, and corruption, and that remediless (*malignam*) of the bloud and humors in the greater veines: for putrefaction doth confound and shuffe all things together: wherefore it is found onely in continuall, dangerous, and maligne agues. By these I would have you to understand that such urine

(although it be not polluted with unclean
reines) doth not alwaies shew the state of
the blood and humors. For oftentimes it is
yellow, thicke, and troubled, and yet the
blood comming out of the veines by
blood-letting is perfectly pure, and red,
as it often chanceth in a quartane and tertian
intermitting, as also in the jaundice,
when superfluous choler doth issue out of
the liver, and gall, and other places, and falleth
into the veines, and is not mixed with
the blood, but onely with the urine: whereupon
they are greatly deceived, which in thick and red
urine do presently command blood-letting, as also
it happeneth many times, that the urine in colour,
substance, and sediment is naturall, and yet blood
let out is faulty, both in colour and substance:
such as are for the most part in the state, vigor,
and before the critick day of continuall agues,
when the urines are perfectly concocted, but the
humor offending not at all, moved and voided. *Fernel. 451. & 452.*

CHAP.

CHAP. IV.

Of colours of Urines.



Colours of urines are 21. which argue and shew crudity and concoction.

Crudity, both darke white, as milke white (*Lactem*) as white of milke Horne-white, *Glaucum*, as the cleare part of a lanterne horne, Gray, *Charopus*, *blandus coior*, like the white part of a mans naile next the joynt. But *Galen* saith, *Charoppus* is like the colour of Lyons eyes.

And light white, *Chrystalline*, *Chrystallinus*. Snowie, *Niveus*. Watery, *Aquens*.

Concoction, but little or somewhat lacking, yet more then the former colours, pale, *subpiceus*, *subpalidus*, flaxen, *spiceus*.

Perfect and absolute, best, palew, or partly saffron, *subrufus*, *subaureus*, *subsulvus*. Lighter then crowne gold, yellow as pure gold, *Aureus*. *Actuar*, *Fulvus*, *rufus*, *Citrinus*.

All degrees of colours following after yellow, doe signifie heate. *Sal. pag. 88. ex Avicen.*

Exceeding

Exceeding the perfect and absolute concoction in these degrees in heate. *Salvian. 88.*

1. Light saffron (*subcroceus, subflavus*) like water wherein bastard saffron is dissolved.

Saffron (*flavus, croceus*) like to water wherein the flower of saffron is dissolved.

2. Claret (*subrubeus, palmeus*) like to bole armoniacke.

Red (*rubens, puniceus*) as red blood, cherries, red apples, saffron it selfe.

3. Crimson (*purpureus vineus*) like blackish redde wine, liver colour, water wherein flesh new killed hath been washed.

Purple (*passens, cyaneus*) of the colour of raisons of the sunne, cherries waxing blacke, like wine boyled, *Salvian. 81.*

Blew (*venetus, fuscus, caruleus, brunus, blavus*) halfe white and halfe blacke mixed.

4. Greene (*viridis, porracius, prassinus*) as leeke leaves, emeraude, coole-wort.

Oylie green (*oleaceus*) popinjay Greene.

Ash colour, colour of lead (*lividus plumbeus.*)

Blacke (*niger.*)

¶ In colours of urines we must alwaies consider whether better succeed worse or contrary, that so we may know the working of nature.

CHAP. V.

Of substance and colour ioynly together.



Thinne substance, joyned with colour white, privately without mixture of humours, as Snowe-water, or Chrystall signifieth either crudity, obstruction or conversion of the humor.

Crudity through decay of naturall heate, and then the urine is made freely without paine, which commeth either by (*Salv. 75.*) Resolution of cause externall, great hunger, long fasting, or watching, great exercise or labour, which if they be all moderate the urine is all more coloured and thicker, *vid. cap. 1.* under kinde of life. So in old men which by age are melancholike, and other cold conditions of the body. *Argent. 25.* Some large evacuation Sowning *Week,*

Crudity.

Or

Or of cause internall, as the ill quality of the humor offending, malignant and pestilent with other evill signes. Or else unnaturall heate overcoming the naturall heate, as flesh seething in a pot, being set in the sunne is lesse boiled, the heate of the sunne drawing out the heate of the water.

Such heate is in the whole body, in the beginning of diseases, especially agues, when unnaturall heate prevailing, the humors are raw and not concoct, and as in a consumption and lingering ague, the moisture of the body is resolved and moulten, which maketh the urine white, *Aegid.*

And in the reines and vessels of urine, as in the pissing evill (*Diabetes*) when through unnaturall heate and strength of the attractive faculty of the reines, urine is drawne too fast from the liver and stomacke before it can receive any substance and colour: and the retentive and digestive faculties of the reines, being feeble, and the expulsive strong, the urine is presently voided often and much; whereupon followeth great thirst: heate in the reines, wasting of the body, costiveness,

stiveness, and if the griefe continue, death.

Aegid.

Or suffocation, and that either of cause externall, as eating or drinking immoderately, sursetting, quaffing, liberall feeding, small exercise, urine made shortly after meat and drinke received, especially much, or diuretique, whereby the urine is made before it be concocted in great and large quantity, without substance or colour.

Crudity
through
suffocation

Or of cause internall, as multitude of humors offending nature, smothering and choaking the naturall heate, as too much oyle extinguishing the Lampe, and too great quantity of Greene wood the fire, as in all humerall diseases before concoction appeareth, urine is white and thin, but after as the matter is concoct, and heate increaseth, urines vary. *Weker*, such as appeare in great cruditie of cold in children, a mortall signe. *Salvi- an. 24.*

Not a good signe in declination of a disease, both for the substance and colour, but either the weth conversion of the humor another way, or relapse and reciduation, except the urine was made afore

afore in great quantity, for so it is a good signe. 31. *Holler.*

Dropsie of cold distemperature of the liver at the beginning, for afterward the matter increasing, the urine waxeth thicker.

Apoplexy.

Falling evill with leadish darke, and diverse colour.

Swimming in the head with a certain greenish colour.

Palsies.

Diseases of flegme, want of appetite.

Diseases of melancholy of his cold, and dry quality, but being voided in substance thicke and blacke. *Aegid.* 37.

Gout with little moats in the sediment.

Diseases of the mother, whereunto womens cold constitutions are subject.

Obstruction.

Obstruction of some parts of the body, in, neere, or about the passage of urine; as the liver, reines, water, conduits, the urine made with paine and little in quantity. Such obstruction ariseth of melancholy, raw, grosse, and indigested, descending to the conduits of urine, as in a quartane with certaine rods or lines in it,

it, and the spleen distent with melancholy maketh the passages of urine straight.

Aegid.

Flegme grosse and glassy, descending to the water conduits, as in women flowers stopped, and regurgitating to the vessels of urine, with scales or blacke dust in the sediment, but sometimes blackish, and a red purulent matter.

Choler mixt with grossly and clammy moisture, whereby it cannot issue out with the urine, as in the jaundice sometimes.

Sand, gravell, as in the stone of the reines and bladder, partly stopping the passages, as also receiving nourishment, and increased of tough, viscous slime, which otherwise would issue with the urine, and make it thicker.

Slimy matter, as in the strangury.

Tumors, impostumes, growing either in the liver, or betwixt the reines and the bladder, or in places neere to the passages of urine, whereby they are made straighter.

Colicke or Iliate, the winde distending the guts, and straitning the reines obstructing them, and continuing above seven daies is mortall.

Conver-

Conversion
of the hu-
mors.

Conversion of the humor which should give substance and colour another way, and so the vessels of urine are more destitute of heate and humor, as to the braine in phrensies mortall, except there be other good signes. *Argent. 30.*

To impostumes under the short ribbes, arme-holes in the necke, about the privy parts.

To the spleene inflamed in ill signe.
Wack.

To other parts of the body as before in thin urine. See there.

In all these, if more coloured urines went before, and ceasing too suddenly and no evacuation succeeded. *Arg. 87. Afluar.*

Milk white. Milke white hath the same signification as was before of snow-water, seeing they differ not in kinde but in degree, but here is lesse hurt, by reason of better colour and tincture.

Health in sharp diseases, if the colour of gold went before.

Death, consumption of the lungs, if the colour of gold went not before, and accompanied with other bad signes.

Pale flaxen. Pale flaxen, the beginning of concoction.

Exulceration of the lungs and consumption

sumption if it be little, and have leadish oily palewe, which is mortall with a laske.

Flegmaticke complexion in a young man being often made in thickish substance.

Palew, yellow, citrine, in whole men Palew, yellow, citrine perfect health, and if the sediment be good low, citrine in young men, by comparison of this all other are to be judged.

Flegmaticke complexion if the substance be somewhat thicke.

In sicke men, hote and sharp diseases imminent.

In old men as a double tertian.

In children as a quotidian.

In young men flegmaticke, melancholike or crude contents if they continue long so, because their urine should naturally be more remisse for abundance of moisture.

Diseases of the breast, the region full of bubbles.

Of the splene, when many rods or strikes appeare like meteors.

Of the liver if it be much in quantity, the body leane, the belly bound.

Light saffron, saffron, of cause external, much watching, great labour and tra-
Light saffron, saffron.

travell, especially in the heate of the Sunne, simple distemperature of heate without mixture of humors, if it be pure and perspicuous, medicines purging choler, as Rheubarb, also saffron, cinnamon, broth of cherries.

Of cause internall, as choler abounding as in a tertian.

Distemperature of humors, especially blood if it be thickish darke.

Melancholike complexion in thicke substance, and cholericke in thin.

End of a sicknesse being made on the criticall day.

Blew, melancholy.

¶ Vrines yellow, saffron, red, do signifie exceeding heate of simple distemperature, if they be pure and perspicuous, but mixture of humor withall, if they be thicke and troubled, *Fer. 447.*

Thicke
substance.

White.

Thicke substance joyned with colour.

White positively with mixture of humors, betokeneth abundance of raw humors, slegme, glassy, salt, unfavoury.

Consumption in a wasting ague, so the fatty nourishment of the body, is molten and voided.

Impo-

Impostumes breaking out, as in grievous agues, so rotten matter is voided setting to the bottome and stinking, *Salvian 77.*

End of an ague, if blood issue out of the nose, and being made on the judicial day in great quantity, and then no impostume followeth.

Milke white like water wherein a little meale is cast, is good in the end of an ague, and rather if great quantity of urine was made before, *B. Holler.* Milk white.

Matter of the stone voided out of the reines and bladder, looke more in the sediment in raw humors and matter of a sore.

An ulcer in the instruments of urine, if it be thicke like a mustrone, and mattery, stinking and falling to the sediment; separation of raw and flegmie matter without corruption or stinck.

Flux of seed in a man or woman, carnall copulation if it be without corruption and stinketh not.

Dropsie if the yellow jaundice continue through great crudity in the veines.

Horne-white, like the horne of an old lanthorne, darke through smoke, or gray, like the darke colour of an oxe liver, not troubled, betokeneth that the body is

full of grosse humors, and flegmatike diseases of the whole body if it be troubled, which is like a beasts water, and so continuing long, or alwaies, yet sometimes being chafed at the fire, it cleareth when it is broken by cold ayre, signifieth that the veines are full of ill humors, headache through agitation of humors ascending. If it waxe cleare above, and clodereth in the sediment, if it be much in quantity, then it betokeneth the end of an ague : if little in quantity, an ill signe in an ague.

All white urines signifie some good, if the patient be strong.

Claret.

Red like cherries.

Claret, continuing of the diseases, yet without danger, if it hath a sediment of like colour and substance.

Red like cherries, or red apples, of cause externall, fore-sheweth that the loynes or reines are beaten and bruised, or some vein neer the reins open or broken, with paine in the place grieved, *Aetuar.* receipt of some purgation of rheubarbe, &c. as pag. 4. died with priver, *Avicen.* which *Mont.* 19. beleeueth not.

Internall, wideness, rarity, thinnesse, or laxity of some veines neere the reines, through which blood issueth, and swea-

teth

teth out in great quantity, and weaknes of body, *Actuar.* the reines or bladder fretted, untill blood commeth, as in the stone, especially after labour, with gravell.

Abundance of blood, as rotten agues especially.

Abundance of choler, as in agues tertion, partly troubled with an uncleane and rough sediment, or semitertian with a leadish colour, and greene cloud.

Abundance of heate unnaturall, wasting and melting the moisture of the body into urine made in great quantity, with fatte swimming aloft, as in a consumption.

Vrine staying too long in the body, being not provoked to issue either by sharp quality, which lacketh in colde diseases, or by great quantity being converted another way, and so at length by delay in the body, waxeth more coloured, and concoct: such happeneth in the pallie, apoplexy, epilepsie, phtisicke, crampe, mortall, *Haff.* dropsie mortall, or else the liver through debility, is not able to separate the blood from the urines, as in *hepatica passione, Salviat. 87. Arg. 38.*

Such also happeneth in the laske, bloody fixie, *Argent. 38. mortall, Haff.*

cholike, iliake, mortall, *Haffurt*, paine in the reines, or else to the place grieved, blood and heate are drawne, or else choler not descending through the passage, betwixt the liver, and the guts being obstructed with flegme, and winde, issueth with the urine, *Aegid. 11.*

Agues decaying, *Fer.*

Obstructions, inflammations scirrous tumors of the gall (being the naturall receptacle of choler) obstructed, the choler issueth at other parts, or else that portion of choler, which should be voided by stool, is here voided by urine, *Argent. 37.* as in the jaundise, with paine in the necke and short ribs, and will colour a linnen cloath put into it.

Of the spleene, and liver, as in the dropie, so choler goeth to the urine.

Relapse, or recidivation of the disease, if it be made thicke, and straight after thin, before and after, the criticall day, because the heate which did at the first expell the disease now is overcome.

In young men without danger, with a good sediment through length of the disease, but in old men death, not able to detain the blood, *Actuar.*

Crimson.

Crimson betokeneth great labour and travell

travell in whole men, especially in the heate of the Sunne or the fire, &c. whereby the blood is inflamed and rosted, so in an ague.

Burning ague with thirst, watchings, cough, and other accidents of an ague, *Actuar.* Aduſtion of choler and turning into melancholy, yet not so ill if there bee a good sediment: but ill, if the contents be ill or none at all, and the urine thicke, and grosse like a cloud.

Purple betokeneth the yellow jaundice if it continue long, if there be signes of concoction, it betokeneth health because the cause of the griefe is voided. Affection of the reines onely after *Fer.* and not of weaknesse of the liver, whether the urine be red, bloody, or crimson, and like to the washing of raw flesh, which *Reus.* misliketh.

Abundance of blood sometimes in young men, with some heavinesse or weight about the liver, and up to the channell bone, or necke bone, and here it is not a very evill signe, but in old men very evill, yea often mortall, because they are not able through debility to detaine the blood.

Blew, beating, bruising, stripes, where Blew.

it is a good signe, because the humor is voided. But *Vassens* was deceived by a woman, mixing an oxe gall, *Reusnerus*.

Extreame cold, and mortification, extinction of naturall heate, if the strength be weake, and no signes of concoction be-fides.

Great exercise, and labour, great heate, and roasting of the blood.

Melancholy arising of a dust colour.

Changing of the bladder from his naturall disposition in old men.

Strangury at hand in those that have the stone.

Recovery and health where the patient is mending in declination of the disease, or being made on the criticall day.

Greene
alone.

Green or rather greenish, *Argent.* alone feldome of good hope, *Mont.*

Cold, extreme, mortall : if leadish colour and blacke follow successively at divers times, pulse feeble, in thirst, or short breath, *Cappiv.* 147. contrary to *Reusn.* 136.

Quotidian ague, melancholy a dust, yellow jaundice especially with an ague.

Heate and adustion of humors a long time : if greene hath blacke immediately succeeding, and not leadish comming between,

betweene, and accompanied with great heate in the body, thirst, ague, short breath, and some splendent glistring in the urine.

Oyly, not such wherein fat like spiders webs floate, but such whose substance is clammy and thicke, as oyle or fat molten, and being shaken is clammy and heavy as oyle, *Fernel*. Green oyly

Good, if it be made only after black urine, as better succeeding the worse.

Made on the criticall day, in great quantity, for so the matter is voided.

After paine of the reines without an ague, especially appearing suddenly with great quantity.

Dropsie, vehement cholike. This urine *Galen* hath often seene without any great hurt following, *Cappiv. 92*.

Ill, in a consumption of the body remediless through great imbecility of the parts of the body rising of great distemperature of heate, that they cannot containe nourishment, which voiding, doth give this colour to the urine. *Reusner*.

And in consumption of the lungs.

Tertian ague in fat and soft tender bodies, *Argent*.

Convulsion

Convulsion of drinesse, madnesse, vomiting continuall thirst, heate, the tongue scorched, &c. going before, yet if better colours follow, better hope, *A-
Eua.*

Ash colour

Ash colour leadish, good in beating, bruising, if it settle to the sediment, in blacke jaundice, because the cause of the griefe is evacuated. *Ill*, extreme and mortall heate in hot agues, if green colour was made before at other times. *Contra Cappivac. 145.* Especially without sediment and other signes of heate.

Mortall, strangury, following in a burning ague.

Extreme and mortifying cold, if the colour before was pale and other signes of cold, *Cappivac. 149.*

The same judgement is of blew colour, but that here all things are greater and augmented.

Blacke.

Thicke substance with colour blacke, of cause either externall or internall.

Externall, eating of Cassia, *Argent. 40.* &c. as before pag. 4. cap. 1.

Fall, bruising, beatings, purgers of melancholy.

Internall by mixture of some humor, as melancholy, blood adust, or choler adust,

adult, *Mont. 17.*

Criticall evacuation with ease of the patient after great diseases.

Quartane declining or rather burning ague, long or sharp diseases with bleeding at the nose and sweat on the criticall day, els death, *Actua.* Child-birth, or with child, *Cap. 151.*

Womens flowers heretofore stopped, and now voided if white or such like went before.

Splenetike diseases with a tumor in the spleene.

Chronicall diseases of the backe and matrix of melancholy.

Melancholy, blacke jaundise, *Wecker.*

Madnesse, fury, hemmoraudes.

Reines and bladder troubled with the stone, with stincke, by breaking some little veines in the reines.

Other griefes of grosse humors, but if there be great heate, paine, ague, want of appetite, a posie, some dangerous canker, carbuncle, or naughty ulcers, *Sal. 97.*

Symptomaticall extreame and mortall, heate and aduotion, as in sharp agues, if Greene urine went before or red, with heate, leannesse and thirst, stinke,

stinke of the urine and small quantity, *Cappiv. III. 161. 169. Fern. Actuar.* which may cause a dangerous cramp or convulsion after great labour, except it be made on the criticall day.

Cold, if blew, green, or ash colour urine made before, with cold, and without stinch a little sediment, and united, *Cappiv. 146. Selv. 94.* but in this case the urine is rather darke then blacke indeed, *Mont. vide mercurial. varia, lect. lib. 2. cap. 11.*

Blacke urines are mortall in all ages and persons, unlesse they come of some cause externall, or criticall evacuations, *Salv. 93. 96. Cap. 157.*

A generall
note.

¶ There be foure elementary qualities, whereof two be called active, and two passive: the active be heate, and cold, and these give colour unto the urine: for heate maketh the urine red and tinct with high colours (which by moistnesse are obscured and darkned, by drinesse quickned & made far more lightsome:) and cold maketh the colour of the water more remisse, as white and such like.

Now the two passive qualities, are moistnesse and drinesse, which cause substance in urines: whereof moistnesse thickeneth the urine, dulleth the colour, and

aug-

augmenteth the quantity : drinesse clarifieth and ratifieth it, and that either by diminishing the quantity, contents, and substance, or by increasing the thinnesse, clearnesse, and brightnesse thereof, with meane colour and grosser sediment.

CHAP. VI

Of the quantity of Urine.

Quantity of urine. Much Much
of cause externall and inter-quantity.
nall.

Externall, moist, and rainy weather, and all things increasing moisture in the body, as sleepe, idlenesse, want of exercise, moist meates, or broaths, or other things which doe moisten the body.

Long and much drinking and quaffing of wine, water, color white, substance thin,
Salv. 106.

Medicines diuretique which provoke urine, breake the stone, or make the urine sharp and salt.

For by their heate they draw much urine, and by subtilty of their parts they attenuate grosse humors for expulsion, the
sediment

sediment being slender and glistering,
Actua. Salu. 101.

Internall evacuation, criticall or symptomaticall.

Criticall, by strength of nature, ease of the patient, and other signes of concoction as in dropsie, anasarca, or great crudity, repletion of humors, when the humor hath been long shut up in a place and now findeth issue, *Weck. Fern.* so abundance of raw humors made thinner are voided by urine as *Fernelius* observed, a drunkard, grosse, fat, and well liking in 8. daies space by continuall evacuation became slender and leane without any sickness at all.

Other diseases colour, whiter, substance thinner, sediment mean, and where thicke urine went before, else not good except nature be strong, so in diseases declining.
Record.

Symptomaticall, through weaknesse of nature without ease of the patient, and other signes of crudity, as when the retentive faculty is decayed in dangerous diseases, or nature is wearied, dissolveth humors and voideth them suddenly by sweate, stooles, or urine, *Actua. 116.* as in laskes, fluxes, want of appetite, chronicall diseases,

diseases, convulsion of heate and drinesse in sharp agues.

Consumption of the whole body somewhat fatty, in colour palew, reddish, high coloured, without signes of concoction, for so the profitable fat, moisture, humors, and substantiall parts of the body are molten, dissolved, and voided by urine. *Sal. 109. Fern. 445.*

Cause internall, heate of the liver drawing abundance of juice from the stomacke too fast, and not able to digest it.

Heat of the reines drawing the urine too fast from the liver and emulgent veines, speedily expelling it as in the pissing ill, colour white, substance thin, sediment lacking, *Actua.*

Cold of the stomack breeding waterish juice, and sending it to the liver, for error in the first concoction is not taken away in the second.

Cold of the liver not able to convert the profitable juice into nourishment, as in ill habit of the body, drop-sie, anasarca, the urine waterish with raw and diverse sediment, *Bl. Hollerius.*

Other excrements not evacuated either by stooke, colour meane sediment

diment thicker and greater. *Aetnar.* or by sweat, or by pores of the skin, by insensible perspiration, &c. so the moist and thin parts are voided more abundantly by urine, so *Arist. 4. de gener. animal. 4.* reporteth a cow (whose paunch-hole being shut up) had her excrements turned into winde and urine, *Salv. 111.*

Little
quantity.

Little of cause externall or internall.

Externall, as dry meats, colour pale w, sediment small and thicker.

Little drinking, tart, stipticke, thicke, or drying drinke.

Much sweat, vehement exercise, or other things whereby the moisture of the body is dried and made lesse.

Internall, vessels of urine stopped or obstructed by inflammation of the water conduits and necke of the bladder, tumor or swelling, tough, grossly, and clammy meates, as in the strangury, medicines, humors flegmaticke, stone, see gravell in the sediment, with paine and grieve about the place affected. *Dolor ostendit locum*, see suppression of urine.

Vessels of urine hurt or weakened by old age, palsie, ill distemperature, or some instrumentall diseases of the parts whereby the urine cannot bee attracted, received,

received, expelled, *Salv.* 113.

Internall cause, as translation of the urine another way, as to the belly, feet, and nether parts in the dropsie.

To the guts in laskes, fluxes, purgations sediment little, substance thin, color white and waterish, *cap.* 12.

To the Hemeraudes, menstruall evacuation of the flowers.

To the pores of the skin in sweat and in sensible perspiration.

Cods in the rupture, *Hydrocele.*

To the whole body, in the small pocks, measles, impostumes, see thin substance. And in recovery of health after sickness, so moisture is turned into nourishment of the body, *Fer.*

Internall causes, sharp burning agues wasting the moisture of the body, colour tending to blacke, *Cappivac.* 111.

Consumption of the body of long continuance whereby the moisture is dried, as in sharp agues, consumption of the lungs, &c.

Meane, proportionable to the drinke Meane received the same day, and other daies before, or somewhat lesse, because some is spent in the body, Health. quantity.

D. CHAP.

CHAP. VII.

*Of the signification of the contents of the
Vrine in generall.*



Contents are, whatsoever is to be seene in the urine beside colour, substance, quantity, perspecuity, and darkenesse, and they occupy sometime the top of the urine, as spume, bubbles, circle, sometime the highest part, or region (the whole urine according to his height being divided into three equall parts, which are commonly called regions) as the cloud (*nubes.*) sometime the middle region, as the iublation, or swimme: and lastly sometime, and that most often, the lowest region, or sediment; as gravell, blood, seed, dust, &c. as hereafter follow.

Contents are sometime lacking in the urine, and sometimes present.

Contents
wanting
for five
causes.

Contents want in the urine for five causes. 1. For want of matter, which should make the contents. As in great exercises, sweat, insensible perspiration, hunger,

hunger, fasting, laskes, purgations, either by vomite, or stoole, emerauds, flowers, &c. also in meats which increase choler, or cholericke diseases.

2. Corruption of the matter, and humors in the body, whereby commeth neither nourishment nor excrement, *Astuar.*

3. Crudity, and lacke of concoction in whole men, by much quaffing, or thin, finall drinke, or by diuretique potions, which provoke urine. Also pissing shortly after drinking, before it receive any concoction, or mixture with meat, whereof contents come. In sicke men, in whom, though humors doe abound, yet they doe not issue with the urine, but lurke in the veines, overloading nature, as in chronicall diseases. Also in sharp agues in their beginning, or increasing great weakenesse of nature, not able to expell the contents. And indeed in all humoral diseases beginning, and increasing the contents are none at all, or little, because nature as yet hath made no concoction, or separation, and in the state of the disease commonly contents are very few. But in declination, nature recovering her selfe, and prevailing against the

disease, the contents, cloud, swimme, and sediment also returne, except in cholericke diseases, where the cloud is sufficient, *Cappivac. 67. 167.* Also in deficient agues beginning, the contents want, as in a tertian, in thicke substance, and yellow colour: but if ash colour, death followeth. In a quartane the urine is thin, and white. In a quotidian, thin, white, and waterish.

4. Conversion of the humor another way, as, in impostumes, in cold weather, weake bodies, and injudicable state of the disease. In inflammations, which draw the contents and humors to them. In parts weake, or grieved whether humors fall, as before in thin urine. Looke there *cap. 2 pag. 13. 14.*

5. Obstruction in white, and thin urines with signes of concoction, or without crudity. See *cap. 2. pag. 13. 14.*

¶ Lesse to be dispraised, if the colour and substance bee good, according to which, the humor abounding, strength of nature, and quantity of the disease are to be judged, as before in substance and colour, *Actua. 94.* But diseases of choler are ended if the cloud onely appeare. But in flegmatike, and of repletion the sediment

ment present must argue their dissolution,
Capiv. 67. 164.

¶ Contents appearing in the urine are Contents
of two sorts : for they are either partly sometimes
naturall, partly unnaturall, sometimes good good and
and sometimes ill. Or else, they be altogether sometimes
unnaturall, and alwayes ill.

In contents which are partly naturall,
partly unnaturall, we consider (as in the
whole urine before) colour, substance, and
quantity.

Colour of the Contents.

White duely knit, or hanging together White.
equally, signifieth good concoction in the
liver, and veines, health, rule of all other.

Not equally knit, but thicker in one
part then in another, signifieth weak diges-
tion, crudity, windinesse.

White not duely knitte or hanging
together, but ragged, tattered and bro-
ken asunder equally, crudity, windinesse.
Not equally, but thinner in one place
then in another, signifieth the falling
evill, windinesse, grosse humors aboun-
ding in the body, measils, or small
pockes, where the colour waxeth
red.

White as snow ; signifieth flegmaticke
humors and crudities.

Pale.

Pale, flaxen, blood turned into choler and evacuated.

Saffron, &c.

Light saffron, saffron, red, claret, signifie crudities, also blood thin and waterish, yet wherein concoction is to bee looked for shortly. Also choler abounding in sicke persons, *Reusn.* 178. Continuance in tertian and quotidian agues especially bastard. A good signe in agues, which rise of abundance either of blood or ill humors, in which the sediment is necessary before recovery can be looked for. But in agues caused through heate of the Sun, much labour, or hunger, the swimme or cloud is sufficient to signifie recovery of health, although the sediment doth not appeare. ¶ For reddish looke substance following.

Bloody.

Blood, like to the washing of raw flesh, signifieth abundance of blood. Or else flux of blood issuing out, as out of some veine broken. But yet we must not be hasty in judgement by this colour, but rather looke after under the title of pure blood voided, *Reusn.* 181. Also it signifieth imbecility, or obstruction of the liver, which cannot concoct the blood, and so it runneth to the bladder.

Blew.

Blew, leadish, signifieth naturall heate
extin-

extinguished or mortified, and therefore great danger.

Greene blackish signifieth great ex-Greene
ceeding heate, or consumption and pining
away.

Blacke signifieth either great cold, if Blacke.
leadish colour went before, and then the
outward parts are cold, *Salvian. 128.* or
great heate if greene colour went before,
and then heate, thirst, and other tokens of
heate accompany it. Both these are mor-
tall, as you may see in thicke substance and
blacke colour.

Or else blacke contents signifie melan-
cholike diseases, or melancholy, critically
evacuated: where it is a good sign of health
because the humor is voided.

It signifieth also consumption of the
reins with an ague, the sediment oyly and
fatty, *Reusn. 188.*

Lastly, it signifieth beating, bruising,
stripes, and so come corrupt, blacke, and
rotten blood is voided.

Substance of the contents is either mean,
thick or thin.

Substance meane, is a good signe of Meane.
health, because it is according to nature.

Thicke contents generally signifie Thicke.
grosse, and raw humors much abounding:

or imbecility of the second concoction.

And in diseases beginning, and increasing an ill signe, because they signifie abundance, and trouble of humors before naturall heate hath concocted, and attenuated them. But in diseases declining a good signe, if the colour, and other signes be good, nature being now of strength to make separation, and expulsion of humors.

Thicke contents, and of colour claret, signifie abundance of blood, or good and strong operation in digestion, *Reusner. 203.* but contents of colour blacke, signifie great store of blood, and the more blacke, the greater adhesion of blood, *Reusner. 204.*

Thin.

Thin contents which doe not easily arise, nor trouble the urine, when the urinall is shaken and moved, *Reusner. 186.* signifie raw humors, or want of heate in the second concoction in whole men. But in diseases rising of cold, or ill juice, thin substance, sheweth great danger. Because naturall heate is choaked, and oppressed, that it cannot expell the humour offending. Contrariwise in sharp diseases, or in diseases which rise of simple and bare distemperature without mixture of
hu-

humors. They are not very ill, seeing humors are not the cause of the disease, which voiding with the urine, should make the contents thicke.

If the sediment lightly arise, the urinall being shaken, it argueth more heate, *Vass. 71.*

¶ If they continue either thicke, or thin, they signifie weaknesse of nature, which should change them, *Argent. 71.*

Quantity of contents is either much, little, or meane.

Much signifieth. 1. Lacke of sufficient heate to attenuate and concoct the grosser parts so in winter, drunkards, sleepers, idle persons, women and children contents are moe, *Reusn. 64.* Much.

2. Much nourishment, good and strong digestion.

3. Other evacuations suppressed, as ordure, sweat, &c. and especially in flegmatike bodies, which are grieved with some disease, which will end well.

Little or few contents.

Little.

1. Want of matter, as in hunger, great heate, summer, lusty age, great exercise, quartane and quotidian agues beginning for want of heate, *Argent. 72.* but afterwards

wards much. Contrary in tertians.

2. Obstructions and stoppings of the emulgent veines, water conduits, reines, bladder, &c. *Salvia*. 120. As in thin urine see there.

3. Crudity and slow concoction.

4. All causes which doe attenuate and make thinner any matters in the body, that so the thinner part may evaporate out, and the grosser stay within, and make obstruction, also all causes which do wast and consume the body.

Meane.

Meane contents of good signification because they are according to nature.

CHAP. VIII

Of contents in speciall.

OF deformed contents, altogether unnaturall, and alwayes ill; which appeare either in the sediment or lowest region, or in the swim or middle region, or lastly in the cloud or upper region. And first of unnaturall and deformed contents in the sediment, which are commonly reckoned fiftene.

Popinjay
greene.

1. Popinjay greene or oyley sediment

ment signifieth.

Colliquation of the whole body, with paine, an ague, and pissed slowly by little and little: or else collaquation of the reines or bladder onely with paine in the reines, no ague, and pissed fast.

2. Spider webs or fatnesse swimmaing in the urine, signifieth Spider webs.

Consumption of the whole body with an ague.

Red vetches or fitches, *ervaceum*, *orobeeum*, signifie Red vetches.

1. Great inflammation of the liver.

2. Colliquation of the whole body: or of the reines onely, with conditions as before in popinjay Greene.

4. Plates, scales, (*folium*, *lamina*, *squame*) having bredth and length onely, like scales of fishes, especially a gogeon.

1. Consumption or colliquation of the whole body, with an ague, slow pissing, stinck, and crudity in the rest. All concurring together. Plates, scales.

2. Exulceration of the bladder, pissed thicke and fast, with stinke, purulent matter, paine, and concoction, *Salvian*. 176.

3. Inflammation of the bladder or liver.

5. Grosse

5. Grosse and course branne, *Fur-*
fur.

Thin.

1. Consumption of rhe whole body
with crudity and thin urine.

2. Scabbednesse of the whole body,
without ague or other paine, *Hasfur*, or
of the bladder onely, with concoction,
no ague. And paine of the bladder, thicke
and stinking, an itch about the root of
the yard, and purulent matter was pissed
before, *Salv.* 175.

3. Great heate wasting the substance
of the liver, and burning the blood, if the
bran be red.

6. Fine bran, fine meale or flower (*simi-*
Fine meale *la, puls, xριμνον.*)

1. Colliquation of the sollid parts, if
they be white.

2. Extreame adustion of the blood, if
they be red, and therefore long sicknesse,
Salvian. 179.

3. Sharp sicknesse, and for the most part
mortall.

4. Women with childe have fine meale
or starch in the swimme, or setting to the
sediment of their urine, like fine carded
wooll, the rest of the urine a little trou-
bled, and greenish, or ash colour, *Fernel.*
Looke motes in the sediment.

7. Raw

7 Raw humor (*crudus humor*) clammy but not stinking like snevill of the nose, or white of an egge.

1. Exulceration of the reines and bladder without paine. Raw humor.

2. Impostume or stone of the reins, and bladder with paine.

3. Multitude of raw humors sometimes causing an ague, and appearing in the sediment, signifie ache in the reins, sciatica, gout, strangury, tenasmus. In the swimme, crudity and windinesse in the stomacke, with a noise, and vomiting. In the cloud, grieft in the spirituall parts, shortnesse of winde, pursivenesse, spitting of blood, *Hasfur. Aegid.*

4. Eating of meats hard to digest, in sore labouring men, *Vass. 74, 75.*

8. Rotten and purulent matter. Matter of a sore (*pus*) stinking, but not much clammy, which when the urinall is shaken, disperleth it selfe into fatty and oyle resolutions, and signifieth,

1. Exulceration of the reines without paine, *Fernel.* of the bladder with paine about the bladder. Of the liver with paine under the right short ribs, and doth not alwayes stinke liver putrefied; if it be very dreggy, *Aegid. 69.* Rotten matter.

2. In

2. Inflammation or impostume of the lungs, whose purulent matter passeth by the left cavity of the heart into the great artery, and thence into the emulgent veins, and so to the reines.

3. Plurisie, whose matter passeth as before. As also by the veine without a fellow (αζυγος) rising on the right side of the hollow veine, neere the heart and by the backbone, nourishing eight ribs on either side: and so to the midriffe, and at length by divers turnings into the left emulgent veine, and thence to the reine.

4. Rhewme, which if it be thick, coming to the bladder it maketh difficulty in pissing by drops. 5. Also the phrensie.

6. or squinsie, whose purulent matter of these three is conveyed through the jugular veins into the hollow vein, and thence into the emulgent veins, and so to the reines, if there be paine and griefe in the lungs, liver, bladder, in these griefes aforesaid, otherwise if purulent matter be voided, and no paine in these members, it is certaine that nature voideth it rising of inflammations. 7. or venerous and contagious flux of seed, *Fernel*.

9. Haires like pieces of flesh, long, slender, and hairy) *poli, caruncula, filamen-*

ta)

1a) onely in thicke urine, *Salviun*. 182. and signifie.

1. Dissolution of the whole body, with an ague, colour oily or greene, *Hasfurt*. or of the reines onely without an ague, the haire fatty and grosse, and may bee felt betwixt the fingers, like a small, slender, fleshy substance. Haires or filaments.

2. Obstruction of the reins, with grosse and clammy humors, as in the strangury, dysury, pissing ill, &c. with nummednesse of that foot, which is on the same side the reine is, right left.

3. Exulceration of the reines or bladder, whence commeth purulent matter.

4. Flux of seed after carnall copulation, venerous pollutions on the night: or filthy and exulcerate gonorrhea, *Fernel*.

5. Womens white flowers issuing, or women having uncleane matrices, *Fern*.

10. Gravell sand, (*Arenula, sabulum*) red, white, or duskyish browne, signifie.

1. Stone breeding or dissolving either in the reines, if the gravell be red, (yet sometimes white by filth inclosing the gravell, *Fernel*.) and paine about the reines in the backe, no ague, and the gravell being taken out of the urinall and dried in a shadowie

dowie place, are hard in touching. Or in the bladder if the gravell be white and pain in the bladder, about the share where the haire groweth.

¶ Yet those men whose passages of urine are wide and open, and expulsive faculty strong, and making such sandy urine freely, and without paine, in good quantity, are seldome troubled with the stone, because their reines and bladder are hereby clenfed, and the gravell not suffered to stay so long to unite and gather together to make the stone, but such gravell doth argue great heate of the liver or reines, and abundance of raw and grosse humors fit to breed the stone, if the passages of urine should be obstructed, or expulsive faculty, weakened, *Salv.* For abundance of tough and viscus superfluities, straitnesse of passage, and weakenesse of the expulsive faculty, are three especiall causes of the stone, *Aegid.*

A profitable
history
of the
stone.

¶ But least the contents mixed with urine, which for the most part come from the vessels of urine, should deceive him that would rightly judge of other parts of the body, I will repeat the whole cause, and order of the effects from the be-

beginning. Red gravell come from the reines, which being many, and thicke doe threaten the stone, of those growing together, groweth a stone as big as a graine of millet, or barley corne, which being extruded out of the substance of the reines, into a larger place; doth make the urine thicke, troubled, red, or blackish, a forerunner of the disease of the reines, the same being thrust into the head of the water pipe (*ureter*) causeth great paine, and then the urine is white and thinne as in obstructions, the same growing bigger, is sometimes so fastned in the reines, that it cannot be removed; and then after great labour and exercise by fretting of the reines with the stone, the urine is not onely thicke, and troubled, but also bloody, and sometime clods of blood settled downe: such urines are sometimes made after a fall, or beating, and seldome after great labour: when the ulcer is thus made, in rest, and quietnesse, the urine is thicke, and white: after labour more coloured, with a thicke sediment: after that the urine is thicke, white, and stinching, and purulent, not much unlike milk in which purulent matter settleth, when as the ulcer is hollow and

E filthy,

filthy; such urine hinder judgement of all other parts of the body, save the reines, and when as the ulcer groweth very filthy, and commeth to a fistula in this white, thicke, troubled, and stinking urine, oftentimes a thicke, slimy, tough matter, like the snevill of the nose, or white of an egge setleth, and such oftentimes issueth when the stone is in the bladder, for though the matter thereof commeth from the reines, yet it groweth and wrappeth about the stone through fault, or weaknesse of the bladder, which may appeare, for that the urine continueth so when the stone is voided: moreover filthy ulcers of the necke of the bladder, and yard, and fluxe of seed in the French disease, doe cause such urines: but at the first certaine slender filaments appeare, then more grosse, whereof the whole urine waxeth thicke, and lastly this filthy sediment that now we speake of. And although the ulcer be cured, yet certain filaments remaine through imbecility of the bladder, and spermatike vessels, *Fernel.455.*

2. Aduision of humors. As in diseases of choler, as burning agues, *Salvian. 183.* tertian agues, single and compound.

Also

Also in diseases of melancholy, as quartane ague long continued. Gout after long drying and thickning of the humor. Paine of the joynts and reines. Leprosie, morbus Gallicus confirmed, emeraudes, costivenesse, *Aegid.* Also heate of the liver, if there be no paine nor heaviness about the reines. ¶ Such sandy gravell floteth in the whole body of the urine, like motes in the Sunne-beames, and after settling to the sediment, covering the bottome of the urinall, or in colour browne, or duskyish red, and cleaveth to the sides of the urinall, and being dried in a shadowie place are somewhat soft and tractable. Looke after for gravell in the swimme.

A gravell
note it
gainst such
sand.

3. Receipt of sharp diuretique medicines which provoke urine, which skouering the reines, doe bring such gravell with them.

11. Wormes, little dragons. (*vermes*, Wormes. *dracunculi.*)

1. Putrefaction, whereof they be engendred, *Argent.*

12. Blood, pure, thicke, grosse, or cloddy, (*sanguis, grumus sanguinis*) when the vessels of blood and urine

have their

Blood,
clods of
blood.

1. Orifice opened (*Anasomus*) whereby blood issueth, either because that the blood exceedeth in quantity, as in sanguine men. Or in criticall evacuation, though seldome, so womens flowers voiding by urine are grosse and cloddy, settling to the sediment, and no paine in any part of the body. So in declination of diseases of the spleene, with much residence and dregs, *Hausfurt*. Or else when the blood exceedeth in quality, as when it is too thin, sharp, or salt, tickling the vessels, and provoking them to expulsion. Or else when the vessels of blood and urine are either too large, wide, and open, as the veines emulgent carrying the urine from the hollow veine to the reins, being too open, doe receive blood from the hollow veine, *Wecker*. Or when the said vessels are too weake in their retentive faculty; as when the veines be too weake, so in the small pockes (*exanthemata*) blood staid in other places, and overloading nature, is voided by urine, which if it stinke, and the pocks be blew or leadish, mortall. Or the liver too weake, so pure blood is voided by stoole, or urine, as the hollow or round part of the liver

liver is affected, with paine under the right short ribs, and stinketh not. *Hæf.* or the hollow veine too weake, so pure blood is voided with paine about the seventh joynt in the backe, from *os sacrum* upward. *Aegid.* Or lastly, the reines and bladder too weake and feeble, as in old men at the pits brinke.

2. Membranes or tunicles of the veines, laxe, thin, and full of pores, so thin, watery, and warme blood running between the skinned and the flesh, sweating out (*Diapnoia*) in proceſſe of time gathereth together into blacke and leadish clods.

3. Substance and membranes hurt (*Sidēspōtis*) by a fall, beating, bruising, leaping, violent exercise, great burdens, so cloddy blood voideth. Or by medicines, which are corrosives and causticks or openers of obstructions, or by the stone in the reines or bladder after exercise: so the reines or bladder being wounded and exulcerated, filthy and cloddy blood voydeth with stinke and paine about the places grieved. *Dolor ostendit locum.*
Record.

¶ If blood issue by any of these wayes in the vessels of the lungs, breast, arteries,

stomacke, belly, or guts, there followeth vomiting of blood ; but in other parts by the two first waies, it gathereth into clods. *Ianus Cornarius in Gal.lib. 6. c. 27. To-πus, 74.*

13. Seed (*sperma, semen*) which lightly floteth and ascendeth, the urinall being shaken. And issueth with the urine either for that the

Seed.

1. Seed aboundeth in quantity, as after carnall copulation, desire of carnall copulation, or venerous dreames, &c. Or when the seed in quality is either too sharp, hot, or salt, then the yard is extended, and issueth with some delight in good quantity, and stinketh, *Wecker* in gonorrhæa. Or when the seed is too thin or waterish, which issueth without sense almost and unwillingly, the yard not extent, and then the whole body waxeth leane, especially the loines. Or lastly when the seed is virulent and contagious, as in *morbo gallico*, with stinch of the urine, and sometime gravelly or sandy contents.

2. Vessels spermatike are either too slippery ; or else weake in their retentive faculty, with wasting of the whole body, as in Apoplexy, palsie in the genitours,

tours, falling sicknesse. For in these diseases, stooles, urine, seed, &c. are involuntary.

14. Dust, (*cineres*) black or leadish and Dust.
heavy, like a blacke powder rising of melancholy, and signifieth,

1. Fluxe of the emeraudes present or shortly to follow, the colour of the urine remisse. And sometime vomiting of blood.

2. Paine and diseases of the spleene, especially after purging of melancholy. The dust being somewhat browne or purple.

3. Stopping of the flowers. In substance, thicker, colour pale, flaxen, or white, sediment little or lacking. And sometime vomiting of blood, and the dust gathered and heaped together in the sediment or bottome.

4. Paine in the reines, loines, and other inferiour parts, by which the melancholike blood passeth in the hemorrhoidall veines to the seat.

15. Motes (*Atomi*) such as appear in the Sunne-beames, little and round, red or white, little flockes. And these appearing in the urine signifies,

Motes.

1. Putrefaction as in the plague, *morbis gallicus*, with stinck.

2. Great agitation and commotion of the humors, as in the small pockes and meafils.

In these two the motes stote all over the urine yet warme, and during the naturall heate thereof; and after settling to the sediment, doe signifie a doubtfull strife betwixt nature and the disease, to be decided by age, strength of the patient, and other signes, *Montan. 50.*

3. Rhewme in the whole body, if the said motes doe appeare in the whole urine. Or in the superiour parts of the body onely, if they appeare onely in the upper region of the urine. Or in the middle parts of the body, if they appeare in the middle region. Or lastly, the lowest part of the body, if they appeare onely in the lowest region or sediment of the urine, the motes are rough and the urine troubled.

4. Gout with conditions, as before in rhewme.

5. Diseases of the mother.

6. Conception in women, settling down to the sediment, which if they be red, through greater abundance of heate and blood,

blood, a male childe is conceived. If white through lesse abundance of heate and blood, a female is conceived.

Moe signes of Conception.

Because Physitians vary in judgement, what urines doe signifie conception (yea *Io. le Bon.* in his treatise *de therapeia puerpurarum.* *Forestus* in his booke *de incerto & falaci urinarum iudicio, lib. 2. cap. 3.* and divers others, doe deny that any certaine judgement thereof can bee gathered by urine.) I thought good therefore not onely to set downe their severall opinions thereof by urine, but also adde moe signs besides urine. Both generally of conception, and specially whether it be of male or female.

Signes of conception by urine.

1. Generally womens urine with child is lesse concoct, white, thin, with a little sediment, yet the nearer they draw to child-birth, it waxeth more coloured.

Divers opinions about womens conception.

2. Some say there appeareth in the urine, like fine flower or starch, which after the urine is settled, hath a sediment or swim somewhat thicke, like fine carded wooll, and the rest of the urine troubled, and somewhat Greene or blacke.

3. Other

3. Other hold that their urine is white with a cloud, swimming aloft, and many motes floating in the whole urine, such as are in the Sunne-beames and especially in the first moneth; and when the urinall is shaken or moved they depart asunder, like carded wooll. In the moneths following, the urine is red or yellow, and at length blacke, with a red cloud swimming aloft.

4. Other some take their judgement by the sediment only, which they affirme is like cotten or fine carded wooll; or raw silke. *Rensner* thinketh that they bee little flockes or motes, &c. as before in motes.

Other signes of conception, besides the urine.

1. The tearmes are staied without grief after they have issued eight or ten dayes after copulation.

2. They feele a wringing, beating, and moderate paine about their navill, wombe, loynes, stomacke, backe, and thighes.

3. Their appetite to meat somewhat decayeth, yet longeth after strange things which affection is called *Citta* or *pion*, *Aegid.* 74.

4. They

4. They have sometime bitter belchings, vomitings, hardnesse of the paps, and rednesse of the teates, swelling of the veines and arteries, especially within the nose and eyes, paine, or swimming in the head, dimnesse of sight, red pimples in the face, costivenesse, no desire of copulation, though before they had great delight.

5. If a very cleane needle be put into a womans urine with childe in a brassen bason all night, and on the morrow be coloured and died with red spots, she hath conceived: but if it be blacke and rusty, she hath not.

6. If after supper going to bed, she drinke water and honey sodden together (*Hydromel*) and feele a wringing in her guts she hath conceived, else not, *Hippoc. 5. Aphorif. 57.*

Speciall signes of conception whether it be of male or female.

1. Motes in the sediment red and round, Whether
signifie a male : but motes white and male or female.
round, a female.

2. Milke (in conception of male) cometh sooner into her breasts, which being milked, and set in a glasse in the Sunne, it
wax-

waxeth hard into a stone, not unlike a bright pearle.

3. All her right side is better and more lusty then her left, right eye fairer, right pap greater with milke, the pulse of her right artery swifter.

If milke be cast upon the womans water with childe, it will sink to the bottome, neither will it depart asunder, though salt be cast in.

4. If a womans urine be kept three days in a glasse bottle stopped, and after strain it through a fine, cleane linnen cloath, if there appeare, little quicke living creatures, and red, a male is conceived, if white a female.

6. Tearmes flow after the fourteenth day, and the childe is felt to stirre, and move after the fifty day. To be short, all things are more quicke, lusty, and strong in the male, then in the female, *Respon.*

And to be short, because the seed of the male is hotter and livelier then of the female, therefore all things in the male are sooner performed, as the male receiveth all the lineaments of his body, and perfect shape of a man in his mothers wombe in thirty dayes: the female

male in forty. The male beginneth to stirre in the wombe in three moneths: the female in foure. The male is borne and commeth forth of the wombe in nine moneths, the female in ten. And the mother her selfe after birth of a male, hath forty daies assigned for her purification; but after the birth of a female, fourescore daies, *Levit. 12.4,5.* And that men are hotter in constitution then women, may easily appeare in that they have fewer excrements, larger veines, blacker colour, greater and lustier members, greater voice, more audacity and courage then women, *Bertinus.*

*Contents in the middle
region of the u-
rine.*

The middle region of the urine, subla-
tion, or swimme, (*εναώπνυα*) is the middle
distance of the urine divided into three
equall parts: and here, (as before in con-
tents in generall, and in the sediment in
speciall) are considered.

Contents
in the mid-
dle region
or swimme

Colour, substance, quantity, contents,
&c. All which have the same signification
for the most part, as before in the se-
diment.

diment, save in these sixe differences following.

1. Contents in the swimme, signifie some windinesse, whereby they are elevated so high.

2. Good contents in the swimme, which signifie health (as white, saffron, claret, light, and equall) are not so good as in the sediment, yet in agues of choler, heate of the Sunne, hunger, labour, anger, &c. Presence of the swimme, is a sufficient signe of health, but of flegme or melancholy, (which are not so soone concocted) the presence of the sediment is necessary before there can be any security of recovery, *Cappivaccini*, 67.

3. Ill contents in the swimme, which are signes of sicknesse, as blacke, greene, leadish, solide, and deformed contents, are not so ill, as in the sediment, *Cappivac.* 171.

4. Contents in the swimme give signification of the affections and diseases in the middle parts of mans body, as about the short ribs, *hypocondria*, inward centrals, as the spleene, liver, heart, lungs, bowels, &c. *viscera*, brest, stomacke. *Vas-* 81. As also contents in the cloud, signifie

fic diseases of the highest part of mans body, and the sediment of the lowest parts. Yet divers mislike this application of the three regions of the urine, to the three parts of mans body, *Aegid.*

5. Sand or gravell, (not in the sediment, but in the swimme) in colour reddish, and sticking to the sides of the urinnall, as though the urine should thicken; or congeale into stones, signifieth Adustion of the liver, *Vas. 90.*

6. Motes (*Atom*i) floating through the whole urine, and being elevated and pushed up by unnaturall and flatuous heate, and after it be cold, settling to the sediment, or troubling the urine, signifieth a great strife in the veins, betwixt naturall heate and the disease, to be determined by age, strength, diet, complexion, and good order of the patient, *Mont. 50.*

*Of the cloud or uppermost region
of the Vrine.*

The highest or uppermost region of the urine (being as I said before divided according to his height, into three equall parts) is called the cloud (*nubes, νεφς*) wherein we consider (as in the two former regions) Cloud.

regions, substance, quantity, colour, contents, &c. which have the same signification as before: save that contents here in the cloud, compared with other regions, have least signification of good, in good signes: and contrary, least signification of ill, in ill signes.

Colours of the Cloud.

White.

White.

1. Not of very evill signification, because all contents are naturally white.
2. In perfect tertian agues abundance of choler, and so continuance of the disease.
3. In rotten agues (*synochus*) great danger through pain and griefe in the forepart of the belly about the short ribs, *Rensner.* 236.

Red.

Red.

1. Changing of the sicknesse into a quartane.
2. Concoction of humors, beginning to be on the seventh day or criticall day, if this red colour appeare on the fourth day or judiciall day.
3. Head-ache, through winde and flatuous spirits ascending up into the head, and so continuance of the disease.

Blacke

Blacke.

Blacke.

Long watchings, and lacke of sleepe whereof followeth the lightnesse of the braine, raving, doting, which in old men is mortall.

Deformed contents in the cloud.

Deformed contents of the cloud are of three sorts, according to the places which they occupy, for 1. either they appeare in the whole region of the cloud. 2. or occupy onely the edge, ring or circle round about the urine. 3. or lastly they flote all over the top of the urine. And to begin with the first.

Deformed contents appearing in the whole region of the cloud are three.

1. Little white cloud (*nebula*) signifieth White flegmatick matter to be elevated by strong cloud. heate, and for the most part, a good signe and signification of concoction, and which will shortly, as the disease declineth, setleth down to the sediment, by orderly proceeding of nature.

2. Smoake, in colour, blackish, reddish, Smoake, or yellow, signifieth viscous and tough matter adust, cholericke. Abundance of unnaturall heate, puffing up, and elevating some raw matter, and therefore conti-

F

nuance

nuaunce of sharp diseases not without danger.

3. Small graines, kernels, droppes or motes dispersed, ragged (*granula diuisa*) which if they appeare neere to the top of the urine, especially if they be blackish, they signifie adustion of the matter, and wasting of the solid parts, as also that they are violently puffed up by unnaturall heate of maligne agues, which oftentimes are mortall, *Mont. 51.*

Deformed contents appearing in the circle round about the urine, commonly called the crowne (*corona*) which sometime is wanting, and signifieth,

Equall conflict betwixt nature and the disease.

The crowne appearing round about the urine signifieth generally.

1. Some windinesse, wherof the crown is made.

2. Affections and griefes of the head.

3. If the colour of the crowne differing from the rest of the urine be better, it is a good signe, that nature overcommeth, but if it be worse an ill signe, that nature is overcome.

The placing of the urinall, and difference of the sight, may cause diuers colours

lours in the crowne, because it consisteth indifferently in the confines or common concurse of three diuerse transparent mediums(*media*) the urinall, the urine, and the aire; and therefore the colours of the crowne may be variable according to the diuerso position of the urinall, the urine, the aire, and the eye of a Physitian beholding it. Like other apparent and not permanent colours, which are made of diuerso mixture of light and darke. (*Lucidi & umbrosi*) as colours of the rainbow, of a Doves neck, a Peacockes taile, changeable taffety, and morning clouds lightened with the Sunne-beames, infinitely variable, according to their diuerso positions and placings, taught in the precepts of optikes. Therefore *Actuarius* counsell is, to looke into the crowne with one eye.

Colours of the crowne.

1. Leadish, blew, and blacke, signifieth the falling sicknesse, or mortification of the braine, whereby the sinewes doe not their duty in sense and motion. Leadish.

2. First leadish, then red certaine daies after, signifieth head ache, or recovery of the animall power.

3. Greene signifieth choler greene like Greene.

like leekes (*porracea*) or phrensie of green choler, if it be in a sharp ague : or aduſtion of hot choler aſſaulting the head.

4. Black is of the ſame iudgement that blacke water is of. For it ſignifieth mortification, if leadish colour went before : or aduſtion, if Greene.

Thicke crowne joyned with colours.

Saffron. 1. Saffron ſignifieth choler in the head, and head-ache thereof.

White. 2. Wateriſh and white, ſlegme in the hinder part of the head.

Claret, 3. Claret, or crimſon, abundance of blood in the head, pricking paine of the temples, fulneſſe of the veines, and the patient ſuppoſing himſelfe to ſee little red motes flying before his eyes. Or head-ache through abundance of blood.

Thinne crowne joyned with colours.

Flaxen. 1. Flaxen, ſignifieth ache in the left ſide, of the head of melancholy. Or the head, to be of cold and dry conſtitution. Or melancholike complexion, and therefore ſuſpicious, fearefull, covetous.

Yellow. 2. Yellow, head-ache of choler pricking in the ſide of the head.

Crowne trembling, ſhaking, quivering,

vering, signifieth

1. Paine all along downe the backe- Crowne
bone. trembling.

2. Windinesse.

3. Thin humor.

4. Stopping of the flowers.

Deformed contents floating in the top of the urine ; either in the crowne, or all over the top, as spume, froth, bubbles, droppes of oyle, or droppes of fat like spider-webs.

Some, froth, bubbles, is an extension, Fome.
swelling, or puffing up of a viscous moi- froth. bub-
sture in a thicke and grosse vapour tho- bles,
rough agitation : either of heate, as in wa-
ter seething. Or motion, as in the sea. Or
both, as in running waters. In urine they
are made as *Montanus* thinketh, of na-
turall or unnaturall heate rarefying and
dissipating, some tough, viscous, and fleg-
mie matter in the veines resisting, where-
upon the heate not finding ready issue,
doth puffed up and extend it, making froth
or bubbles. But *Argenter* misliketh this
opinion for that, in bastard agues, quoti-
ans, and tertians, where both flegme
and unnaturall heate abound, which might
stirre and puffed it up, and yet froth doth
not alwayes accompany these agues.

Therefore hee thinketh that froth in the urine, is alwayes caused of motion, and gives signification of rheumes and destillations, descending from the head into the inferiour parts, &c. They appeare in the urine, being caused either of cause externall, or internall.

Externall cause of some, froth, and bubbles.

Externall
cause.

1. Eating of pulse or fruit, sursetting,
Fernel.

2. Pissing with some violence into the
urinall.

3. Shaking of the urinall, *Aegid. 68.*
Salvian. 144.

Internall
cause.

Internall cause of some froth, or bubbles, wherein are considered (as in other contents) colour, quantity, substance, time of their appearance, and their differences.

*Colour of the some, froth, and
bubbles.*

Diverse.

1. Diverse. Signifieth crudity, *Aegid. 68.*

White.

2. White. Raw and flegmaticke matter.

Saffron,

3. Saffron. Jaundice. But mixed with some whiteneffe in the middle, diseases of the lungs.

4. Lead

4. Leade colour or blackish, matter Leadish.
adult.

5. Blacke. Extinction of naturall heate. Blacke.

Quantity of the fomes, &c.

Much, many, or thicke together, long Much.
continuing, and scarcely to be abolished
with a rods end, wrapped about with flax,
and put into the urine, *Aegid. 66.* and signi-
fieth

In whole men. Some tough and viscous
matter which naturall heate stirreth :
wherefore good diet must be used, least
more matter be increased, or naturall heate
hindred.

In sicke men (if they appeare in the
crowne or circle) abundance of raw tough
matter mixed with ventositie and agitati-
on thereof, which may signifie colicke,
head-ache, surfet. But if they appeare over
the whole face of the urine, they signifie
weaknesse of the head, flux of seed, weak-
nesse of nature, through obstructions and
raw humors. Also if they appeare in the
beginning of diseases, an ill signe, because
such agitation, is of unnaturall heate, and
accompanied with other ill signes, as
weaknes, old age, feeble, pulse, winter, &c.
mortalitie.

But appearing in the urine after the

beginning of diseases with other good signes, it is a good signification of health, because such agitation is of naturall heate now prevailing against the disease. But with other ill signes, as ill colour and contents, &c. it giveth ill signification that such agitation is of unnaturall heate, and in weake persons, Death, but in strong persons, Long sicknesse, and great danger, *Week.*

Little.

Little quantity of the spume, froth, bubbles. *Bohn 94*

Little or few, and dispersed, two or three together signifie lesse head-ache and ventosity, &c. except the colour be yellow, for so choler increaseth the grieve.

Substance of the spume, &c.

Thicke.

Thicke, a better signe.

Thin.

Thin, a worse signe especially in agues signifying great grieve, *Blas. Holler. 162.*

Time of appearance.

Time of appearance

Not appearing at the first, and afterwards appearing, signifie concoction or declination of an ague. As in thicke urine. See there.

Differences of spume, froth and bubbles, be three.

1. Little

1. Little bubbles (*granula*) like pinne-
heads, or little droppes of quicke-silver,
descending downewards towards the
swimme under the crowne into the bo-
dy of the urine, signifie griefes of the
head, as rhewme, which distilling downe
into the inferiour parts of the body, as to
the nose, maketh the pose, to the eyes, and
causeth ophthalmie. To the eares, making
a singing noyse, and deafenesse. To the
pallat of the mouth, and maketh the u-
vula to fall downe. To the throat, and
causeth hoarsenesse. To the mouth, and
causeth exulcerations. To the jawes and
mandible, tooth-ache. To the windepipes,
the cough. To the lungs, shortnesse of
breath: to the guts, the colike, iliacke,
whereof sometime followeth a laske or
fixe. To the stomacke, crudity. To the
huckle-bone, sciatica. To the joynts in the
hands, knees, and feet, the gout. To the
reines, the nephresie. Also the passages by
which the rhewme distilleth, are many,
as the arteries, backbone, and veines: also
the meat-pipe, winde-pipe, and sinewes.
But the rhewme descending from the
head by any of these three last, doth not
necessarily cause bubbles in the urine. *Wec.*

2. Great

Ampullæ.

2. Great bubbles (*Ampulla*) signifie griefe in the reines (*nephritis*) for the reins being cold and farre distant from the heart the fountaine of heate, and rheumatike matter also cold and heavy, and descending downeward, is also drawne by the reines, and there for want of heate remaineth unconsumed, and so breedeth griefe in the reines, in urine thin, and white bubbles. Also according to *Rhasis* fluxe of blood at the nose: If they be round, plurisie, Gout with rheume and an ague.

Spume,
foame.

3. Spume, froth, signifie griefe in the middle members of the body, as heart liver, spleene, &c. rising of such causes as the colours of the urine shew, *Fern. 453.* Windinesse, collike. In yellow colour, the jaundice. In leadish oyley and palew, the pthificke.

Note.

¶ But of some, spume, and bubbles, we can safely gather no generall precept, save onely that they signifie abundance of grosse and raw humors, which being moved in the body, doe cause such spume and bubbles, and so consequently length of the disease in strong and lusty persons, and death in weake and feeble, espec-

especially the spume and bubbles long continuing in great quantity, *Salvian.*

152.

Droppes of fat like spider-webbes, droppes of oyle swimming aloft, signifie

Drops of
oyle or fat.
Spider-
webs.

1. Colliquation or consumption for the most part mortall of the whole body, with an ague, and then this fat is pissed slowly by little and little, at severall times, and in small quantity, and well mixed or incorporated into the urine, but at the later end of the consumption when the patient is almost spent, this fat ceaseth to issue with the urine, being already dissolved and voided, and the body decaying leane and dry, *Salvian.*

2. Colliquation of the reines and bladder onely without an ague, the fat being pissed fast, suddenly, in good quantity, at once, and not so perfectly mixed with the urine, and with paine and heate about the reines. Yet *Cardan* saith, that hee himselfe observed small slender spider-webbes in his owne urine every day for 40. yeares together, and likewise in many other urines without any hurt at all, and therefore he thinketh that these spider-webbes which signifie colliquation must

must be greater, *Salvian*. 164.

3. Inflammation of the liver.

4. Criticall evacuation in concoction and declination of the disease of some humor offending, whereby some fat member receiveth hurt, and so part of his fat is dissolved, *Salvian*.

5. Oyle drunken, *Fernel*.

CHAP. IX.

Of the smell of Vrine.

1.
No smell.



Smell of urine is either none at all. 2. or sweet. 3. or stinking.

No smell at all signifieth extreame and mortall cold in sharp diseases, especially if stinking urines were made before, and no ease of the patient succeedeth, *Salvian*. 60. *Vassæ*. 60. *Argent*. *Montan*.
BH.

2. Sweet smell of the urine is either of cause externall, or internall.

Externall

Externall cause, as

1. Perfuming of the urine after it, is made with muske, juniper, sylphium, lase-^{2.} ^{Sweet} ^{smell.}
 serpitiū, styrax, rosen of larch tree, or other perfume, *Fernel. Bertin.*

2. Eating of turpentine, &c. because it is not easily changed in the body by reason of his viscosity, nor draweth any store of matter with it, *Argent 60. Salvian. 60.* &c. *Montanus* thought, that by eating of sweet smelling things, the urine should stincke, and contrariwise by eating of stinking things, the urine should have a sweet smell, whom *Argenterin* confuteth. For garlike stinketh, and being eaten, maketh the urine also stinke, and contrary turpentine, hath of himselfe a good smell, which being taken into the body, giveth the same smell to the urine.

Internall cause, as

Dominion of good blood not putrefied.

3. Ill, or stinking smell, is likewise of ^{3.} ^{Ill or stin-} ^{king smell.}
 cause externall, or internall.

Externall cause, as

1. Perfuming it with stinking perfumes, as assafetida, galbanum, sagapenum, smoke of burnt feathers, brimstone, &c.

2. Eating of *Cardius benedictus* (because it doth moove and stirre up the hu-

humors, and converteth them to the passages of urine :) of rue, onyons, annise-seed, garlike, rotten cheefe, stalkes of sperage, fenell, fengreeke, &c. *Argent. Salvia. 98. Aegid. 11. Fernel. vide P. Apon. in problem. Arist. 2. 14.*

Internall cause.

Mens urines according to the diverse constitutions of the bodies from whence they come, are in severall degrees of better or worse smell : for those who have abundance of pure blood and other humors according to their naturall disposition, free from putrefaction, and expell their excrements both universall and particular, in due time and quantity, and have a moderate use of the fixe things not naturall, doe make urine (as all other excrements) lesse stinking, yet somewhat ordinarily, because urine, as all other excrements, come of impure matter, and in mens bodies, which be moist, and subject to putrefaction. Yet not in all bodies stinking ill, seeing it is concoct, *Argent.* And though it is too base for the Physitian, yea sometimes dangerous to put his nose to the urine, to discern the stinch thereof : yet the knowledge hereof hath good use amongst other differences of urine

rine, yea, in demonstrating putrefaction, ulcers, and impostumes in mansbody, is to be preferred before all other, *Argent*. But to come to the matter againe. Stinking urines are evermore an argument of putrefaction, 1. either of the humours, 2. or solid and substantiall parts of mans body. Which you may distinguish thus, for if the putrefaction be in the humors onely, the stinke began lately, and the urine is thicke or troubled, and chanceth by one of these three waies : either for that the humors

1. Breed crudity, through want of heat, Putrefaction of humors. as in those which are full of ill humors, as flegme and melancholy, because they make the urine thicker, and being cold, not provoking the vessels to expulsion, they stay longer in the body, and breed putrefaction.

2. Stay too long in the body, as in the strangury, dysury, stone, when the sediment is full of filth, and paine in pissing, so in exulcerations or impostumes of the reines, or bladder and gonorrhœa, the urine white and thicke, and the sediment full of matter, *Fernel. Salvian. 99.* so in creticall evacuations of impostumes, and inflammations, with ease of the patient, and

and signes of concoction.

2. Are infected with the plague, in a confused and troubled, red urine, with little motes much dispersed. With *morbis gallicus*, with sandy and gravelly red contents.

Putrefaction
of solid
parts.

But if the putrefaction be in the solid and substantiall parts of mans body, as the liver, spleene, veines, &c. it is with paine, and in urine rather thin then thicke; and the stinch of long continuance, for which causes there is great danger: for thin urine seldome stinketh, for want of putrefied humours and excrements. And stinch long continuing, sheweth that the putrefaction is entred into the habit of the body, *Cappivac. 112. Ar- genter.*

Note.

Some say that the urine stinketh in some sharp agues, and diseases, which *Salvian* denieth, save only in the plague.

CHAP.

CHAP. X.

Of the manner of pissing.



Manner of pissing, is either hard and uneasie : or else involuntary.

Painfull, hard, and un- Painefull easie pissing is either be- pissing.

cause that the

1. Urine is too sharp (as in the strangu- ry) by mixture of some sharp humours, as salt, flegme, choler, purulent matter: or by ill diet, or some hot distemperature in the veins, as in sharp and continuall agues, or some criticall evacuations. Or when the glandulous parts about the bladder are dried up by immoderate venery, disease, or medicine, which should mitigate the sharpnesse of the urine.

2. Vessels of urine, reines, bladder, yard, either too weake, or troubled with exulcerations, by which urine passing causeth paine and smarting. 2. Also with impostumes, swellings, gatherings, in which the urine is first white, then filthy, and lastly rotten. 3. With inflammations, whereof followeth vomiting of choler, continuall ague, and paine in the reines,

G

Bertin.

Bertin. 4. With obstruction of the stone and gravell (as you may read, *pag.* 64.) Of tough and clammy humors, and ventositie distending the vessels. 5. With distemperature of heate and drinesse. 6. With convulsion of (*sphincter*) the muscle shutting the necke of the bladder, or of the sinewes adjoyning.

3. Blood, or the wombe is inflamed.

4. Guts, or the wombe distended with tumors or ventositie, as in the colicke, whereby the reins and emulgent veins are pressed and straitned.

In voluntary pissing, when one maketh urine unwittingly, or against his wil, which happeneth either for that the

Involuntary pissing.

1. Vessels of urine, bladder, reins, &c. have their retentive faculty hurt, weakned, or decayed, as in the Apoplexy, falling sicknesse, paulsey. Or when the muscle (*sphincter*) shutting the necke of the bladder; Or sinewes comming from the backe, serving thereto are hurt, by fall, beating, wound, &c. Or made feeble and weake by cold distemperature, or by too much moisture in children, or drinesse in old men, whereby the aforesaid muscle and sinewes cannot detaine their urine, but many times they bepisse their bed.

So

So in great and sudden feare, when the blood, heate, and spirits, fly to the heart, and inward parts, whereby the outward parts, and those which be far distant from the heart, are destitute of blood, heate, and spirits, so men suddenly terrified and astonished, not only void urine, but other excrements against their will. Likewise in the pissing ill, the urine white and much, and the patient thirsty, and the body decaying. See before, *cap. 5.*

2. Principall Agent the braine not directing the animall faculty, nor communicating it the sinewes and muscles of the vessels of urine, whereupon they cease from their function, and let the urine passe away by drops, as they receive it, as in mad men, raving, doting, in sharp diseases, but if there be other signes of concoction, it signifieth criticall fluxe of blood at the nose, because the matter being drawn up to the braine, and yet signes of recovery, must be voided at the nose, *Salv. 113.*



Urine is suppressed in whole men being occupied in some importunate business, as pleading at the barre, preaching, reading, &c. Also sleeping, whereby they cannot be at leisure, or else forget, and so for a space their urine is wholly suppressed, but in processe of time must needs have issue, neither is it in mans free choyce alwaies to suppress his urine, though for a time he may. For it is not simply a voluntary action, as speaking and walking is, &c. but mixt partly voluntary, partly naturall, as cough, neesing, vomit, belching, sighing, respiration, &c. whereto we refer, evacuation by stool, and urine, &c. but seeing this suppression of urine doth neither give signification of sicknesse nor health, we leave further to speake of it.

Suppression
of urine
in sicke
men.

Suppression of urine in sicke men is either because the,

1. Vessels of urine are weake and not able either to draw the matter of urine, or to expell it being made.

2. Watery humor the materiall cause
of

of urine is wanting, as in want of drinke or moist meats. 2. Or else is converted another way, as in the dropisie, *Argenter.* laskes, &c. But in these cases the urine is rather little then none at all. See little quantity of urine before, *cap. 6.* 3. Or is obstructed and stopped that it cannot haue issue either by some tumor or inflammation accompanied with swelling, paine, an ague, &c. or of schirrous swelling without paine or ague; or impostume with paine or an ague, or lastly, some fleshy substance, descending from some ulcer, with some blood and small fragments of flesh voiding with the urine, and a syringe put up at the yard into the necke of the bladder, and removing the fleshy fragments away, the urine presently issueth: or with the stone, and then gravell was voided before: or by clods of blood, remaining after some issue of blood, or by some purulent matter proceeding from an ulcer, or lastly by some thicke and grosse humors, or filth and corruption descending from the veines, liver, or other superiour members, which suppression of urines in agues especially continuall, signifieth death more certainly, then any other signe in the

urine. In this case *Argenterius* scarcely ever knew any escape death; unlesse the fault be in the reines or bladder, *Arg.* 89.
4. Or when the bladder is so distended, by too great quantity of urine too long kept, that it cannot unburden it selfe thereof, *Wecker in Ischuria*, and therefore it is convenient to pisse, as often as need requireth, and not to keep it too long, for thereof ariseth suppression of urine (that we speake of) and sometime the stone, or difficulty in pissing, and sometime the dropsie; neither on the other side do I commend their practise, who like dogs are still pissing, for besides many other inconveniences, they bring their vessels of urine to such an ill custome, that in old age (when the retentive faculty through want of heate decaying) they can scarcely hold their urine, but it will issue from them against their will. But I wish all men to void their excrements both by stoole (for being too long kept in the body, they annoy the head by their stinking fume ascending, breed ventosities, wringing in the guts, cholike, &c.) and by urine, that they may follow their ordinary course of life, for therefore nature hath appointed muscles to the neck of the bladder, and seat, that men may
at

at their pleasure detain their excrements for some space. *Placotomus de tuenda valitudine.*

2. Sometime the greater guts are so obstructed through tough and viscous flegme, that the meat and drink concocted in the stomacke, cannot come to the liver to receive further concoction and separation of urine, *Holl. lib. 1. cap. 47. de morbis internis.*

4. Sometime the backebone is bruised, broken, or hath some dislocation in the joynts: that thereby the vessels of urine cannot performe their duty, *Wecker.*

CHAP. XII.

Of what parts of the body urine giveth signification.



Urine giveth signification of diseases of such parts of the body,

1. Whence it receiveth matter wherof it is made colour, substance, contents, darknesse, perspecuity, smell, as the stomacke, guts, mesaraicall veines; and

all other parts of the body, for the materiall cause of urine is drinke, or other liquor, which in the stomacke is accurately mixed and incorporated together with the meat, and made one substance and white juice called of the physicians *Chylus*, which descending into the winding capacity of the guts is separated partly into excrement, and partly nourishment. For the purer part thereof is sucked of the mesaraicall veines, and conveyed thence to *vena porta*, and at length to the liver, where being converted into blood, and the excrementitious parts thereof, sequestred and sent to their proper receptacles, as choler to the gall, melancholy to the spleene, and the watry thin part to the reines, but not all, for some part thereof together with the blood (which it maketh thinner for more easie conveyance) is distributed into every member of the body. From whence so much as is not spent in the body, or evaporated out by sweat, or insensible perspiration, returneth backe againe the same way to the liver, whence it is drawn of the emulgent veines, and descendeth to the reines and bladder. Therefore urine is not onely made of that watery substance

substance which is drawne from the liver, but also from the greater and lesse veines, and from the whole body. Ashee may easily and plainly perceive by experience, who will for three or foure dayes together, either receive no drinke at all, or but little. The urine therefore, that is neither too thin by much quaffing, nor otherwise polluted by mixture of other impurities, doth manifestly shew the state and constitution of the humors which are in the liver and greater veines. And also, though not so manifestly, in the smaller veines and all other parts of the body,
Fernel.

2. Where it is made, as the liver, and the hollow veine.

3. By which it passeth, as the emulgent veines, reines, and water conduits.

4. Wherein it stayeth, as the bladder with his muscles and sinewes.

5. By which it is expelled, as the yard.

6. Which doe deprive it of any colour, substance, perspecuity, darkenesse, quantity, contents or smell, as when it is not made, or being made is not attracted, or not expelled, or obstructed and stopped in the vessels that it cannot have passage to be voided, as
by

by rumors, grosse humors, stone, gravell, inflammations, ulcers, impostumes, flesh growing, winde, or through weaknesse, distemperature, fractures, ruptures, dislocations, wounds of the vessels of urine, either primary in themselves, or by consent of others, &c. Or being made, is converted another way, as to the head in phrensies, to the stomacke in vomitings, to the belly in dropfies, to the guts in lasks, to the mother in fluxe of tearmes, to the cods in ruptures, to the joynts in sciatica, gout, to the parts weak, grieved, inflamed, apostomated, &c.

7. Which doe exonerate themselves by urine, as the head in rhewmes, phrensies, &c. The throat in the squinsie, the lungs in inflammations, the solid parts in a consumption, the spleene in melancholike diseases, the veines or arteries broken, in pissing of blood, the spermatike vessels, in fluxe of seed, the mother in tearmes suppressed and voided by urine the hemorrhoidall veins in the emeraudes, the joynts in the sciatica, or gout, and diverse other parts of the body in evacuation, criticall, symptomaticall, or artificiall.

Of all these you may finde severall
exam-

examples in this treatise precedent.

CHAP. XIII.

*Of crude, concoct, and dangerous
vrines.*



Ecause mention is of-
ten made heretofore,
of crude, concoct, and
dangerous urines, as
also that they be very
needfull to be known
perfectly, & alwayes
had in memory; see-

ing they comprehend in few words, the
sum of all that hath heretofore bin spoken.
I thought good in the end to adde the des-
cription thereof.

Concoct u-
rine, such as
men onely
make who
are in some
latitude of
health, is in

colour } palew,
 } light saffron.

substance, meane.

contents } equall,
 } white,
 } light.

smell, not stinking.

pissing in due } paine,
time without } heate,
 } cold.

r.
Concoct
urine.

Crude

2.
Crude
urine.

Crude u- rines onely. Such as men make incli- ning to sick- nes, or reco- vering after sicknesse, is in	{	colour	{ white, pale, saffron, claret,	
	{	substance	{ thicker, thinner.	
	{	contents	{ whitish, pale,	(quall.
			{ somewhat	une-
		smell,	not much stinking.	
		(pissing not in due time.		

Vrines meane betwixt crude and concoct, are of two sorts. 1. For either they encline more to concoct. Such as have a good colour, but thin substance. Also a white and light sediment, but not equall.

2. Or else they encline more to crude. Such as have reddish colour, like to water wherein raw flesh hath been washed, which are made of blood not perfectly concoct.

Vrine

Vrine,
Crude and
dangerous,
such as men
make who
are grie-
uously sicke
and in dan-
ger not to
recover, is
in

{ colour { Greene,
 { ash colour,
 { blacke.
substance { very thin,
 { very thicke,
 { oyle.
 { Greene,
 { ash colour,
 { oyle,
contents { blacke,
 { very unequal,
 { deformed.

3.
Vrin crude
and dange-
rous.

smell very stinging.
pissing altogether out of
due time. Or not at all,
B. Holler. 270. Cappivae.
195.

CHAP. XIV.

Of methodicall practise in indgement
of Vrines.



Efore you give judge-
ment of the urine ; it is
needfull that you me-
ditate with your selfe
on these precepts fol-
lowing in order.

Considera-
tions fit for
practise.

1. Remember the ge-
nerall considerations in the first chapter,
both

both concerning the urinall and the urine. As also which be the best urines simply, and in respect of age, sexe, complexion, time of the yeare, kinde of life, &c. which you may have so perfectly in memory, that you can presently tell how farre that urine which is brought unto you, differeth from a good urine, in colour, substance, contents, &c.

2. Whether the urine be altered by some externall cause mentioned in the first chapter and throughout the booke; or else through default of the reins and bladder by which the urine passeth. For these two impediments either severall or concurring, hinder the judgement of the inner parts, *Fernel. 443.*

3. Consider what diseases are incident to the countrey where the patient dwelleth, or what common disease is their stirrings: as for example, if the patient be an old man, and in winter, rainy weather, and in a moist and fennish countrey, it can hardly be otherwise, but that he is troubled with a cough, rhewme, poxe, and lacke of digestion, and the rather if he be given to surfetting, much drinking, and bee of a flegmatike complexion, and heretofore troubled with rheumatike diseases. But

contra-

contrariwise, if hee be a young man, and cholerike, in the middle of summer, hote weather, hote climate, after hote diet and inmoderate exercise, it is very likely, that he is troubled with a burning ague, tertian, fixe, or pluresie, to which of these he is most subject, or which at that time is most stirring in that countrey. After this sort you may judge of other diseases without helpe of the urine.

Three causes of internall diseases.

4. If the urine be faulty, and yet neither through externall cause, nor of the reines, then it must needs shew some distemperature of the inward parts, heart, liver, spleene, lungs, veines, or other part of the body. Which distemperature is either simple, without mixture of humors, which colour of the urine in thin substance will shew, or with mixture of humors in a thicke and troubled substance, or else putrefaction, in a confused urine. Which three be the internall causes almost of all diseases, whereby you have already attained no small knowledge, what to doe, or what evacuation is convenient for the cure of the disease, although you cannot as yet, particularly understand the same. *Fernel.*

5. Of all differences of urines colour

is

Which difference of urine is to be preferred in certainty of signification, and wherein.

is most mutable and uncertaine of signification, as being subject to many alterations of light cause. As by much drinking, thin drinke, as water, white wine, or by eating of hote spices, sena, cassia, &c. yea in one day every urine that a man maketh is unlike an other in colour, so that here especially the infamy that urine is a lying strumpet, hath some appearance of truth. Contrariwise the contents of urine are of most certaine and true signification of all other, and least subject to alteration, for that they are either fragments of the parts of the body, or contained in the parts. Of these *Hippocrates* and *Galen* especially make mention, not greatly regarding the rest. The other differences of urine, substance, perspicuity, darknesse, quantity, smell, &c. are of meane signification betwixt colour and contents. And yet every difference hath speciall signification above the rest in some diseases: for stinking smell of urines giveth more perfite signification of putrefaction, ulcers, or impostumes, then either colour, substance, or contents. Suppression of urine, in agues especially continuall, giveth more certaine signification of death, then thin

Smell.

Suppression.

sub-

substance, ill colour, or want of contents: for these shew one crudity, which in time is curable: but the other happeneth through great obstructions of the reines, liver, or other superiour member, which at that time are incurable. Colours of urine colle-

Colours.

cted in due time, from an orderly patient, giveth better signification of the humor offending in the body, then any other. Lastly, contents issuing with the urine, doe especially signifie strength of nature, which in time will prevaile against the disease. For when the digestive faculty is weake, the matter whereof contents arise, cannot be overcome and prepared to be voided. So that every difference of urine hath some speciall signification above the rest,

Contents.

Arg. 89.

6. Also you must often see the patients urine on divers daies and divers times of his sicknes, and diligently marke the perseverance or alteration of the urine from time to time, and whether it change from worse to better or otherwise. For as the patient recovereth, nature proceedeth orderly and by degrees from unperfect to perfect, from sicknesse to health, and so by little and little changeth the urine: first, the colour, which is easiest: secondly,

How the urine altereth in diseases.

H

it

it waxeth cleerer; thirdly, the substance waxeth meane betwixt thin and thicke; fourthly, when concoction is stronger, contents appeare. And therefore if contents appeare first before colour, cleernesse or substance, there is the lesse security of health; because this is not the orderly course of nature, but some symptomaticall fit of the disease, which will soone vanish away and decay. And therefore to good purpose must you alwaies remember this theorem commonly received of the Physicians, that nature ordinarily first conformeth the colour, then the substance, and lastly the contents, *Mont. 52.*

How the
colour al-
tereth.

This is the orderly course and proceeding of nature in respect of the colour. In the beginning of diseases, when all the humors are raw, the urine is white. In the increase and state of the disease, higher and deeper colours. In the declining, more remisse againe, untill at length it returneth to his meane colour againe.

How the
substance
altereth.

In respect of the substance, in the beginning it is thin, for nature hath yet made no separation. In the increase and state it waxeth more thicke and troubled, through naturall heate now beginning to worke some separation and expulsion of the humor,

mor, in declining it waxeth cleerer and thinner againe, when naturall heate doth attenuate, rarefie; and delipate the flatuous and grosse humors, and so the urine waxeth lesse troubled. To conclude, for substance of urine marke these foure differences.

1. First thin, and so continuing, is worst of all, signifying extreame crudity.

2. First thin, and afterwards waxeth thicker, and more troubled, better then the former both for heate and strength of nature.

3. First troubled and thicke, and so continuing, better then the two former, for better heate, and more lively strength of nature.

4. First thicke and troubled, and afterwards clearing and waxing thinner, the thicker part settling downe to the sediment, best of all in diseases, as now almost returning to a meane substance, such as is in whole mens urines.

In respect of contents not altogether innaturall. In beginning of humorall diseases through crudity there appeare no contents at all, in increase and state, the disease continuing strong, and naturall

How the contents alter.

heate weake, some though few in declination, when nature waxeth stronger prevailing against the disease, more contents appeare, and first in the cloud or uppermost region, then in the middle region or swimme, and lastly in the sediment.

¶ And this is the ordinary alteration of urine in all humorall diseases wherein is good hope of recovery (except it be accidentally hindred by obstruction or conversion another way, and which have distinction of time of beginning, increase, state and declination. For sharp diseases through their vehement and furious assaults, do not admit such speciall distinction.

8. Lastly, it is good for him that now beginneth to practise, and hath not as yet attained to some good measure of skill, to exercise himselfe in these three, as principall guides of all his judgements, &c. The best urine, *pag. 6.* Crude, concoct, and dangerous urines, *pag. 105.* and especially mortall urins which have signification of death, wherein the credit of the Physitian chiefly consisteth, For which purpose in the alphabeticall Index under death I have collected all mortall diseases, whereof urine giveth signification in this treatise. But yet it is not the safest way resolutely to prognosticate

cate death by them, especially in a young and lusty man, except other ill signes concurre, as want of strength, pulse, feeble, and inordinate raving, breathing with difficulty, lacke of rest, hollow eyes, sharp nose, in voluntary weeping, gathering of straws and flocks, want of sleep and appetite, cold sweat, trembling of the nether lip, excrement by stoole, blacke, greene, or stinking, &c. But contrariwise, if the patient draw his breath with ease, have a good pulse, be strong, lye in bed decently, have a cheerefull countenance, his sleep and appetite not much decayed, and his excrements not altogether unnaturall, doe confirme good hope of recovery. And in like sort in all significations of urine be not too confident, but adde other pathognomonicall signs for better confirmation and more certaine signification of the kinde, nature, and quality of the disease. *Et qua non prosunt singula, multa inuant.*

CHAP. XV.

Of the qualities, commodities, and medicines of urine; and of diseases touching urine, and the remedies thereof.

Hitherto we have compendiously handled the differences, causes, and judgements of urine. But that the treatise may be more absolute, we will adde something more of the qualities, and benefit of urine which it hath either inwardly received, or outwardly applied to mans body.

The quality of Vrine.

All urine (as *Galen* saith, *lib. 10. de simpl. medic. facult. de urina*) is hot and sharp (as *Aegineta* thinketh) but yet differing in degree according to them that make it, For the hotter they are that make it, in complexion, age, time of the yere, and diet, the hotter it is also; yet mans urine (whereof we speake) is the weakest of all other, except tame barrow-hogs, which in many points agree with man, yet it is also of a strong clensing or abstersive vertue, as any thing else, which *Galen* proveth by the example

example of fullers, whouse it to skoure and
clense their cloath.

The comodity and medicines of
urine being taken inwardly.

A mans owne urine drunken is good
against the biting of vipers, and poyson,
and against the dropsie lately begun. *Diosc.*
lib. 2. cap. 27.

A childes urine under the age of 14.
yeares being drunken, helpeth those that
are troubled with straitnesse of breath
(*orthoponea*) which though *Galen* repor-
ting derideth as insufficient and loath-
some, yet *Avicen. lib. 2. can. cap. proprio.*
doth greatly commend, for that by expe-
rience in many diseased persons he found
it true.

A mans urine is good for diuerse disea-
ses of the wombe and bowels, especially
for the collicke : because that partly with
provoking of vomit, and partly by occasion
of sieges, it expelleth strongly all noysome
humors, and for the same cause doe com-
mon practitioners keep it still in daily use.
Recordè Marcello.

Vldericke Hutten also witnesseeth, that
he did drive away the ague above eight
times with the only drinking of his owne
urine, at the beginning of his sicknesse,

which practise many still doe use, and it proveth well.

Likewise *Galen*, *Paul Aegineta* and *Marfilus Ficinus* write that diverse drinking urine did think themselves preserved and cured from the pestilence.

Urine as *Cardan* saith, through his heate is of a thin and piercing substance, so that it is lighter then some water, notwithstanding his saltnesse, for which cause it is good against the colicke and ventositie in the guts farre above salt water, for through his subtle and piercing substance it findeth passage to the inward parts, and through his saltnes it scattereth, breaketh, and disperseth the ventositie, and strengtheneth the inward parts. But to this purpose a childe's urine under fourteen yeares old, and lately made is best, for that is most piercing and hot. *Cardan de subtilitate, lib. 17.*

Medicines of urine outwardly applied.

Urine is good against the itch, and clenseth the leprosie, mixt with salt-peter: stale pissle clenseth running ulcers of the head, scurfe, mangineste, and hot breakings out, it stayeth eating ulcers especially in the privy members, and being put into the

the cares; it clenſeth the rotten and purulent matter, and being ſodden in the rinde of a Pomegranate killeth the wormes thereof, ſodden in a braſen veſſell with honey, doth clenſe the ſcarres of the eyes, and cleereth the dimneſſe thereof, the dregs of urine is good for Saint *Anthonies* evill, if it be anointed thereon, ſo that (as as *Galen* doth wiſely adde) the ſore being cooled firſt with ſome other thing, and be not burning. If it bee heated with oyle of privet, and layd to the wombe of a woman, it will aſſwage the grieve of the mother, and cureth the riſing of the ſame, it clenſeth the eye-lids, and ſcarres of the ſame, *Dioſcor. lib. 2. cap. 17.*

Galen almoſt to the ſame purpoſe ſaith thus of urine: menſurine is of a ſtrong clenſing vertue as any thing els, and therewith doe fullers uſe to ſcoure and clenſe their cloath, which abſterſive faculty Phyſitians perceiving, did uſe it to ſoke, and waſh mangineſſe and ſcabbedneſſe, and running ſores that are full of corruption, and filth, and eſpecially if they have in them putrefied matter, & for ſuch ſores on the privy members it is good, and for mattering cares, and for ſcales and ſcurfe,

scurfe, if the head be washed therewith. I have healed with it many times sores on the tooes, namely which came of bruises, and were without inflammation, and that in servants and husbandmen, which had a journey to goe, and no Physitian with them, bidding them to wet a small clout with it, and put it into the sores, and then to binde a cloth about it: and as often as they list to make water, to let it fall on their sore toes, and not to take the cloath away till it were quite whole. That medicine which is made of childe urine, called *chrysocola*, or gold soulder, which *Galen* there teacheth to make, is exceeding good for sores that are hard to heale: for this medicine doe I use for the chiefeest, mixing therewith such other things, as are good for such like sores. *Galen, lib. 10. de simplic. med. facult. cap. de urina.*

Childe urine will heale the sting of a Bee, Waspe, and Horner, if the place be washed therewith.

It is good for travellers when they goe to bed to wash their thighes therewith, that they may be able to continue their journey the next day, and the rather, if afterwards they anoint them with

with oyle and iuice of rue.

Mans urine is also good against the gout, which may appeare for that fullers are never troubled with the gout, by reason that their feet are so often washed with it, and some who have had good experience thereof with great successe, doe highly commend it for this purpose.

Seeing then urine hath so many commodities, and was in antient time in so great use (as *Dioscorides*, *Galen*, *Pliny*, *Columella*, and all those that have written of cure of horses, doe sufficiently testifie) it came to passe, that the Emperours of Rome got yearly revenues by urines, as *Suetonius* reporteth of *Vespasian*, who answered *Titus* reprehending him for seeking after gaines by such stinking wares, in this proverbiall sentence, *Bonus est odor lucri ex requalibet*.

Of diseases touching Urine, and the remedies thereof.

Record in the latter end of his judiciall of urines, setteth downe certain simple medicines for some diseases which hinder urine, by whose example not altogether

together impertinent to this treatise: I have likewise collected a briefe history of the said diseases with some medicines thereof. And first of the stone.

The stone is engendred in mans body, as a bricke which is first made of tough clay, and put into an hot furnace where it waxeth hard; so a stone is made of tough, viscous, and slimy flegme in the reines or bladder, where through heate thereof it is parched and baked together into the hardnesse of a stone. But that I may speake somewhat fullier thereof, and yet briefly, the materiall cause of the stone is, as I said, a tough slimy flegme, and all causes which increase the same, as all crudities and surfeits, all meats grosse, slimy, and hard of digestion, as milke, new cheeste, all white meats made of milke, all crusts of flower wherein meat is baked, bread not well baked, unleavened. All flesh of great beasts, especially old, as beefe, venison: and all water-foule. Great fishes, especially those who abound in slimy moisture, as eeles, all shell-fish, oysters, cockles, lopsters, crevices. All fruits which engender grosse humors, pears, apples, gourds.

gourds. Roots which breed winde, as
parsneps, turneps. Also all new and thicke
wine and drinke. Likewise because heate
of the reines doth bake and harden the
said flegme, and all causes which in-
crease heate in the reines, as too warme
apparell whereby the backe and reines
are kept too hot, running, leaping, vio-
lent exercise : also riding especially with
his backe towards the Sunne, standing
against the fire with his backe, and meats,
drinks, and spices which increase heate.
Also when the vessels of urine, the reines,
&c. have too strait passages, whereby
that slimy flegme cannot have issue to
be expelled, but staieth within, and tho-
rough heate waxeth hard, whereupon fat
men through moistnesse, and old men
through drinesse, having straight passa-
ges in the reines, are more subject to the
stone in the reines, and lesse in the blad-
der : contrariwise, children though they
are hot and abound with flegme tho-
rough ill diet, yet because their reines are
wider and expulsive faculty strong,
whereby that flegmy matter is voyded,
are lesse troubled with the stone of the
reines, neither leane men for the selfe-
same cause, but both of them are ra-
ther

ther troubled with stone of the bladder, *Hippor. 3. Aphorif. 26.* Lastly, an especiall cause of the stone are the parents, from whom this grievous hereditary disease doth descend upon the childe: and this of all other is hardest to be cuerd. Now with like brevity to come to the cure, seeing there be foure causes which help to breed the stone, tough and slimy flegme, heate to parch and drie it, straitnesse of the passage, and weaknesse of the expulsive faculty. So many things as take away any of these, helpe for the cure thereof, as first a good diet, brothes wherein borage, fenell, parsley, endive, or succory is sodden, bread well baked and leavened, henines, capons, partridge, mutton. Of fish, soles, plaice, trouts, salmones. Of herbs, borage, endive, succorie, sperage, beetes. And to come to the cure. A vomit at the beginning and diverse times, is of especiall use to draw the flegmy matter away from the reines and bladder: then a suppositary, to draw some superfluous excrements downwards, and a clyster is to be preferred before a purgation because it draweth the excrements downwards from the reines, whereas a purgation taken by the mouth

mouth doth alwaies draw some impurity downewards to the reines, but yet the clyster may not be too great in quantity, lest it fill the guts, and distend the reines, and so increate the paine, and stop the passage. After that, if the body be full of blood, open the veine under the ankle and not in the arme (as some would) for all parts of the body grieved above the liver, would be eased by opening a veine in the arme, but under the liver, by opening the veine under the ankle or under the kneec. *Galen Comment. lib. 9. Hippoc. de morbis vulneribus. Galen de vena sectione*, and then if the body abound with other humors a purgation is convenient, but not strong at the first, lest it stirre the humors too much out of season before the passages be open. After this seeke to open the passages of urine about the reines partly with clyster, partly outwardly by some fomentation, lineaments, infusions, but yet too much use of these doth effeminate the reines, and make them more subject to the humors descending. Then at length you may minister medicines which provoke urine, breake and expell the stone. Of which medicines there is great diversity. For some help to mitigate

mitigate the heate of the reins, assuage the inflammation, and hinder the gravell to grow together into a stone, and such be cooling, lenifiers of roughnesse, but not astringent, as the foure lesse cold seeds.

2. Some provoke urine either for that they augment it by attenuating the blood, and separating it from the wheyish substance, and carrying it to the reins, & these are hot and dry towards the third degree.

3. Or some provoke urine, because they minister much watery and wheyish moisture to the body, which the reins drawing to them, doe also draw some humors out of the veines, as white wine, plantaine, and melons seed.

4. Or some againe provoke urine, not by augmenting the quantity, but by cleansing, skouring the reins, and dissolving and expelling gravell now beginning to grow together. As turpentine, root of rest-harrow, betony, fenell seed and root, sperage, juice of limmons, root of sorrell, maiden haire, ceterae.

5. Some againe provoke urine by both these qualities, in ministering much wheyish matter, & also by cleansing the passages.

6. Some provoke urine by their roughnesse, cleansing the reins, and rubbing or fretting

fretting on the stone or gravell, as glasse burned and beaten into powder, eggeshells, gromill, the stone it self which came from a man beaten into powder.

7 Lastly, some provoke urine by an hidden and secret property, as lapis Iudaicus, cassia, rheubarbe.

Those medicines which provoke urine in the second signification by augmenting the quantity, are never to be used in any disease of the vessels of urine as emulgent yeines, reines, water-conduits, bladder or yard, for thereby they are more hurt and obstructed by much quantity of urine passing that way. But such medicines which doe coole the heate of the reins, or which do cleanse and mundesie them from impurity, already gathered, and neither exceed in heat or drinesse, but in subtle and piercing quality. Or which by propriety of their substance help that way, as those in the fourth and seventh signification, and yet these are not at all, or seldome to be used, when the body is leane or in a consumption, or full of blood and ill humors, neither when the vessels of urine are exulcerated or obstructed, or the passages strait, or when the wombe or privy members have any swelling or ulcer; or when

I the

the urine is suppressed, the bladder being full, or issucth with smart burning. For in all these the medicines bring more impurity to the places grieved, and so increase the disease, neither are they to be used in swellings or breakings out of the skin, lest they draw the grieve to the inward parts.

Of the strangury.

The strangury is caused either for that the urine is too sharp, which doth provoke the expulsive faculty to expell it, before any quantity be gathered together. Or for that the retentive faculty to the bladder is weakened through some distemperature, especially of cold. Or else through some ulcer or inflammation of the bladder, to which the urine comming doth excitate the expulsive faculty. Or lastly, when the wombe or bowels being inflamed, or swollen, do trouble or distend the bladder, as in women great with childe, who oftentimes pisse little and often. Now as the cause of the grieve is diverse, so the medicines is likewise diverse for sharpnes of the urine, whether it come of hot and salt meats, too much heating the liver and reines, or of medicines which burne the blood, or of exeroise which likewise heate the

the reines and bladder, or lastly, that the moisture in the glandulous parts is dried up by too much use of venery, leanenesse or drinesse of the body, must bee cured with contrary diet, and medicine which moisten, take away the sharpnesse and coole the blood as new laid egges, chickens, veale, meats made of wheat and barley meale, also lettuce, purslane, endive, sorrell, prunes, cherries, sweet apples, cucumbers, melons, but mixe not herewith too much salt, vineger, or other hot spices, and if the body abound with sharp humors a gentle purgation is good of cassia, manna, whey, diesebasten, also decoctions of lettuce, violets, sorrell, purslane, adding thereto some licorize or prunes, the flowers or leaves of malowes, the root of holihoke. And if the paine be raging, it is good to make an injection by a syringe, of the white of an egge, with rose water or womans milke, or the juice of purslane, or plantaine, &c. But if the glandulous moisture be too much dried up, you must use such meats and medicines inwardly and outwardly as doe moisten the parts, as oyle of violets, almonds, hennes grease, new butter also to make plaisters to be applied to the places about the privy mem-

bers or injections, to be squirted up into the yard or clisters to the same purpose.

Of the pissing evill.

The pissing evill is called, when the patient pisseth as fast as he drinketh, and in like quantity. Or when he pisseth against his will, and it chanceth either through default of the bladder or reines. As when the retentive faculty of the bladder is decayed through distemperature of cold and moistnesse: for too much cold doth extinguish the naturall heate of it, which is of a cold and sinewie substance, and without blood, and too much moistnesse doth loosen the small strings, serving to the retentive faculty, or when the expulsive faculty is hurt through quantity or quality of the urine. Or lastly, when the muscle (*sphincter* serving for voluntary motion, is decayed or weakened either through cold or moistnesse, loosening; or obstructing or benumbing the muscle, as in the paultie, or is rent or wounded that it cannot doe his duty, as some time happeneth to those, who are cut for the stone in the bladder, where either the unskillfull Surgeon doth make too great incision, or the stone too big doth rent the muscle in coming out. Whereupon though the

the wound groweth whole againe, yet the weaknesse of the muscle remaineth: this griefe is almost familiar to children who bepisse their beds in sleep through weaknesse and loosenesse. Or this griefe happeneth through default of the reines being too hot, and so draw the urine too fast from the liver and veines, and the retentive faculty weak cannot hold the urine, but sendeth it as fast to the bladder.

Now for the cure (but I can say nothing of the cure of the muscle of the bladder, for that being cut or wounded, &c. incurable.) First the humor offending must be removed, and then the distemperature corrected, the humor offending if it be heate, must be removed by opening the liver veine in the right arme, or by a gentle purgation of manna cassia, tamarindes, sirupe of roses solutine, diasebesten, and diapruron, but all without scammony and rather often to be used, then much at once, that thereby nature by little and little may be framed to void those humors by stoole which descend to the reines, also a vomite stronger for to draw the humors from the reines, and a sweat is not inconvenient to draw them to the skin, and lastly to correct the distem-

perature, and strengthen the parts, use some of these cooling medicines, as lettuce, endive, suckory, sorrell, also decoctions and sirups of the same, and besides of purslane, roses, violets, and cooling meats and drinks. For strong wines, and which have power to provoke urine are not good. Also a ceare-cloth applyed to the backe, loynes and veines to coole them, ceratum refrigerans, unguentum rosaceum & santalinam mesue. But if the cause came of cold, a vomit and sweat is likewise good, also clysters, wherein oyle of cammomill, dill and bitter almonds must be used. And now and then it is good to use pills of aloes and rheubarbe. The diet must be of hote things, and wherein some hot spices are put. Lastly, use of cupping glasses without incision, friction of the outward parts, and moderate exercise is convenient, both because they heate the body, as also draw the humor away from the inward parts. And thus much briefly of these diseases, not intending fully to handle the same.

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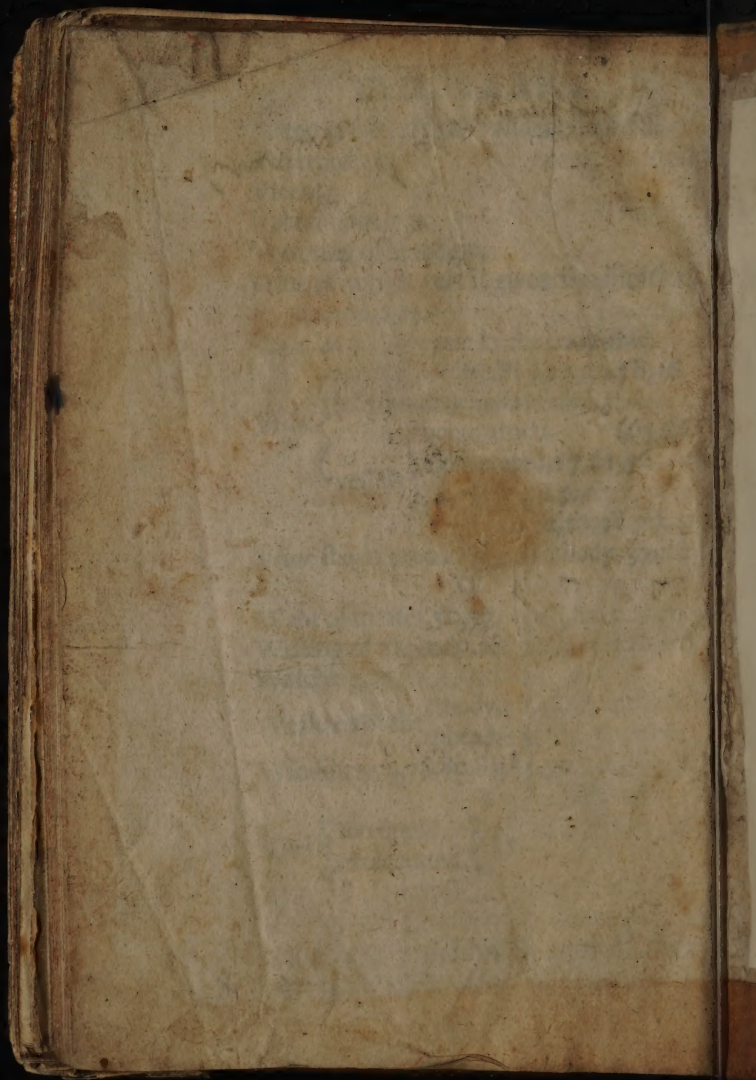
Y

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FINIS.

From Mrs. J. M. W. [unclear]
to the [unclear] of [unclear]

ion
66.
66.



e Fibris.



Arthur D. Cowburn.

